

CROSS-CULTURAL EXPLORATORY ANALYSIS OF OCCUPATIONAL ENGAGEMENT
BETWEEN ASIAN AMERICAN AND CAUCASIAN AMERICAN COLLEGE STUDENTS

BY

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Abstract

The purpose of the current study was to investigate the cross-cultural validity of occupational engagement in Asian American college students and to examine its relationship to traditional Asian values and level of acculturation. Five hundred and seventy Asian American and Caucasian American college students completed a 57-item measure of occupational engagement. Exploratory factor analyses yielded a two-factor structure in each sample. In each sample, the respective two-factor structure of occupational engagement was shown to positively correlate with measures of academic achievement and subjective life satisfaction. For the Asian American sample, the construct of occupational engagement demonstrated a positive relationship with traditional Asian values and no significant relationship with level of acculturation. Results from the study yielded two newly developed measures of occupational engagement, the Occupational Engagement Scale-Asian American (OES-AA) and Occupational Engagement-Caucasian American (OES-CA). Subtle differences in the proportion of variance accounted for by each factor of the OES scales were observed, as well as cultural implications for differences found between the two scales. The researcher provides potential explanations for findings that include differences in the work values of Asian Americans and their pragmatic approach to decision-making.

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CHAPTER 1

Introduction

Currently, over 14.9 million U.S. American workers are unemployed. According to recent U.S. Department of Labor statistics (2012), the national unemployment rate is at 8.2% and payroll job losses are averaging 135,000 each month. The concept of job security is quickly diminishing and it is not uncommon for adult men and women to have multiple career transitions throughout their working lives. While the majority of workers are struggling in the changing economy, others are approaching the job market with a sense of self-assurance and an optimistic outlook on their futures. These individuals are characterized by some vocational psychologists as being *career adaptive*.

Career adaptability is a central focus in Savickas' (1997) Career Construction Theory and it denotes an individual's readiness to cope with imminent vocational tasks. Savickas and other proponents of career adaptability argue that traditional forms of career interventions are inappropriate because they fail to take into account the evolving nature of the world of work. Simply stated, "matching" one's interests to characteristics of a work environment is not suitable because working environments are no longer stable. Savickas and like-minded theorists have placed a call to renovate the field of vocational psychology and to prepare future employees to be more career adaptive.

To support the claim that "matching" career interventions are outdated, researchers began to examine the processes involved in decision-making. Grounded in the cognitive and experimental social psychology literature, Krieshok (1998) proposed an Anti-Introspectivist model (AI) for why traditional career interventions might be a detriment to individuals seeking career counseling. Krieshok contests that career interventions overemphasize rational processes

and neglect the influences of intuition and the unconscious processes during decision-making. By citing studies demonstrating the existence of unconscious processes, the role it has in decision-making, and their inaccuracy in explaining decisions and behavior, theorists are establishing a foundation for challenging commonly practiced career interventions (Bargh & Barndollar; Epstein, 1994; Marcel, 1983; Nisbett & Wilson, 1977).

A model of decision-making which integrates the research on unconscious information processing, the concept of career adaptability, and which addresses the current state of work is the Trilateral Model of Adaptive Career Decision Making (Krieshok, 2001, Krieshok, Black, & McKay, 2009). This model promotes an optimal level of decision-making by integrating rational and intuitive processes. The mechanism for achieving this balance involves partaking in a variety of novel, experiential activities. This concept is termed as *occupational engagement*, and is distinct from other behavioral vocational interventions in that it involves an ongoing process of information seeking. There is no end goal or final decision; instead the byproduct of being occupationally engaged is an increase in career adaptability and confidence in what the world of work may bring.

The construct of occupational engagement has been examined across various outcomes and populations, and multiple instruments have been developed with the intention of measuring it objectively (Black, 2006; Cox, 2008; McKay, Kerr, Hansen, & Krieshok, 2008; Noble, 2008). These initial studies have demonstrated that occupational engagement positively correlates with favorable outcomes including well-being, college grade point average, and income. The construct has also been shown to correlate with favorable personality characteristics such as Openness to Experience and Extraversion.

Like any other promising and emerging construct, there is a need to continuously

demonstrate reliability and validity. The current study will be the first to examine this construct with a large minority population. More specifically, it will attempt to answer four general research questions: The first, can a psychometrically sound, multi-culturally sensitive scale of occupational engagement be developed? Secondly, does occupational engagement manifest differently in Asian American college students than Caucasian American students? Thirdly, what is the relationship between occupational engagement and Asian values and acculturation for Asian American college students? And lastly, does occupational engagement positively correlate with life satisfaction and GPA in the same manner as it does with Caucasian American college students?

CHAPTER 2

Review of the Literature

The following chapter is a review of the literature and consists of several sections relevant to the proposed study. The first section discusses the current state of the world of work and provides a brief review of contemporary vocational theories and interventions. The second section presents a challenge and response to current vocational theories, a concept Krieshok (1998) has dubbed as Anti-Introspection. Next, the Trilateral Model of Adaptive Career Decision-Making is discussed, including studies and instruments intended to measure the related construct of occupational engagement. The fourth section provides a brief rationale for the current study, followed by a review of the vocational literature focusing on Asian Americans. Lastly, the researcher's hypotheses are provided.

Career Adaptability in the Current Landscape of Work

In today's world of work, the concept of job security is essentially non-existent. The idea that "a career" is a contract between employee and employer that begins upon hiring and extends into retirement is a relic of generations past. It was common for workers 50 years ago to spend the majority of their working lives in attempts to advance within a single company. In today's reality, workers move "laterally" across organizations and professions. The old employee-employer contract, based on an exchange of loyalty and hard work for job security, has been replaced by one in which performance is rewarded by training and skill-building opportunities that serve to enhance the worker's marketability (Hall, 2004; Rousseau, 1989). Blustein (2006) has summarized the numerous forces that have precipitated these changes including technological advances, global competition, and changes in labor union structures.

The changing world of work and evolving nature of "career" have resulted in diminished

job security and an increased likelihood that involuntary unemployment will affect most American workers at some time in their working lives (Brown, Hesketh, & Williams, 2003; Eby, Butts, & Lockwood, 2003). As of June 2012, the number of unemployed workers totaled an approximate 12.7 million, and the overall national unemployment rate was an alarming 8.2% (USDL, 2012). Moreover, career and work transitions are becoming the norm. The probability of employees maintaining only one place of employment throughout their working lives is minimal; as the USDL demonstrated in a 40 year longitudinal investigation examining work transitions, men and women are estimated to hold 10.8 different jobs within their adult lives (USDL, 2008).

While some workers may flounder in the changing world of work, others are more adequately prepared to face the challenges that are likely to surface as they progress in their career paths. In general, these individuals possess certain resources in the form of a repertoire of attitudes, competencies, and behaviors that enable them to cope successfully with the changing economy and job market (Savickas, 2005). They are more self-aware, have a sense of how to navigate within the world of work, and perceive themselves as responsible for creating their own careers. Furthermore, they approach vocational tasks with self-assurance and are future-oriented, viewing their careers proactively and planning for the unexpected.

The characteristics described above are known to some vocational theorists as *career adaptability*, a central focus in Career Construction Theory (Savickas, 1997, 2005). Savickas defines career adaptability as “a psychosocial construct that denotes an individual’s readiness and resources for coping with current and imminent vocational development tasks, occupational transitions, and personal traumas (2005, p. 51).” The construct is comprised of four dimensions: (1) concern about one’s vocational future, (2) a perception of control over one’s career, (3) curiosity about oneself and the world of work, and (4) a sense of confidence in one’s ability to

make career decisions and engage in vocational tasks.

Career Construction Theory asserts that vocational behaviors and interests emerge from an active process of deliberation and thought, not from preexisting facts. Simply stated, individuals construct their vocational identities through the combination of past memories, present life experiences, and future aspirations. The goal of career counselors ascribing to the Career Construction Theory is to solicit a client's vocational personality type, to identify their life themes, and to advocate for them to be more career adaptive.

Savickas and other proponents of career adaptability contend that the traditional forms of career counseling are insufficient in preparing future employees for the unpredictable and evolving world of work. The most extensively employed approach in vocational psychology hinges on the suggestion that there is one *right* career for every person (Krumboltz, 1991). Career counseling interventions based on this idea utilize "matching" procedures; where career-related decisions are determined by the pairing of individual interests to characteristics of differing working environments. These concepts stem from Parsons' (1909) trait-factor theory and were later integrated into contemporary models of vocational psychology; including Holland's (1997) widely practiced Person-Environment (P-E) Fit Theory. Though Holland's person-to-position paradigm has demonstrated to correlate positively with job satisfaction (Furnham & Schaeffer, 1984), Savickas (2000) asserts that it relies on stable occupations and predictable career paths.

Recognizing that job security is a rare commodity for the majority of working adults, a call has been placed for vocational psychologists to direct their efforts in preparing future employees to be more tolerant and confident in the ambiguous world of work. By encouraging employees not to fixate or foreclose on a specific career path, this contemporary paradigm strays

from the “match” and advocates for employees to be adaptive in their career decision-making.

The Argument for Anti-Introspection

Theorists began to explore areas of research outside of vocational psychology to describe the inadequacies of traditional matching interventions in addressing the current landscape of work. Based in the cognitive and social psychology literature, a model known as Anti-Introspection (AI) emerged as a promising explanation for why traditional career interventions are inappropriate (Krieshok, 1998). This model was influenced by several authors’ assertions that the majority of decisions made stem from intuitive judgments and processes (Mandler, 1975; Neiser, 1967). Such theorists propose that people lack access to higher order mental processes involved in decision-making and when asked to reflect on their decisions, faulty explanations are often brought to mind and verbalized. In support of his AI model, Krieshok (1998) examined the career decision-making literature and determined that traditional career interventions overlooked and underutilized clients’ unconscious and intuitive processes.

In the past 25 years, several social and cognitive psychologists have proposed that the mind consists of two separate but related operating systems of information processing: (1) the logical, conscious, or rational system, and (2) the intuitive, unconscious, or experiential system (Epstein, 1994; Heppner & Frazier, 1992). These theorists argue that these two systems play equally important roles in both learning and decision-making.

Epstein (1994) proposed that when learning new tasks, the rational and experiential operating systems function sequentially. That is, novel behaviors are initially processed through the rational operating system, and once the task is learned thoroughly and in its entirety, the task begins to operate outside of conscious awareness in the intuitive operating system. He termed this process *unconscious awareness*, a construct within his Cognitive-Experiential Self-Theory

(1994).

An example of a day-to-day task operating within the unconscious awareness is driving an automobile. Initially, the task requires a considerable amount of attention to the mechanisms of maneuvering a two-ton vehicle in an unfamiliar context. However, once the learner acclimates to this task, he or she can more easily operate the automobile while engaging in conversations and listening to music. Epstein's theory (1994) asserts that the mind, in attempts to conserve energy, will delegate learned tasks and behaviors to operate within the intuitive or experiential system. He and other researchers contest that these dual processes are also at play when making decisions.

In Krieshok's (1998) review of the decision-making literature, he provided a vignette of a consumer purchasing goods at a grocery store as a demonstration of how unconscious awareness impacts decisions. For example, when deliberating between various brands of cereal, the mind will often direct its efforts to "go with what feels right." By utilizing the experiential or intuitive system, the mind expends less energy than it would by calculating ounce per dollar or calories per serving for every box of cereal. In fact, several theorists contest that the experiential system is not only more efficient than the rational system (Bargh & Barndollar, 1996), but that a significant portion of our decisions and behaviors derive from this system as well. Some extremists claim that the rational operational system functions merely to allow people to verbalize explanations for their behaviors and oftentimes these explanations are inaccurate (Wilson & Schooler, 1991).

Several studies have demonstrated that thoughts and behaviors are easily manipulated outside of one's conscious awareness, a concept known as *subliminal perception* (Bargh & Barndollar, 1996; Nisbett & Wilson, 1977). Studies investigating the influences of subliminal

perception on behavior suggest that individuals are unable to report on the existence and effect of subliminal stimuli. To test this assumption, Nisbett and Wilson (1977) openly asked participants if experimental stimuli influenced their decisions on a verbal association task. In their study, subjects were assigned to memorize related word pairs (e.g., ocean-moon) and later asked to respond to open-ended questionnaire items (e.g., “my favorite laundry detergent is ___”). Participants who were given the related word pairs (e.g., ocean-moon) were more likely to provide a related response on the questionnaire than those participants who were not provided with related word pairs (e.g., platypus-cake). For example, subjects who were instructed to memorize the word pairing of “ocean-moon” were significantly more likely to respond with “Tide” as being their preferred laundry detergent. Later, when inquired if the word associations had any influence on their responses, participants failed to report on the effects of the stimuli and instead focused on distinctive features of their response (e.g. “I like the Tide box.” or “My mother uses Tide.”).

In a similar study by Bargh and Gollwitzer (1994), researchers examined the effects of subliminal stimuli on participants’ performances on a word-search puzzle task. Participants in the study were either primed with words related to achievement (e.g., strive, success) or with words related to affiliation (e.g., sociable, friend). Participants were then paired with a confederate and assigned to collaboratively complete a word-search puzzle task. Unbeknownst to them, confederates intentionally performed very poorly thus placing participants in a goal conflict situation. Participants could fulfill the achievement goal at the expense of the affiliation goal, or the affiliation goal at the expense of the achievement goal. Results demonstrated that participants primed with the achievement stimuli found significantly more words than participants primed with the affiliation stimuli. All participants reported that they were unaware

of the subliminal stimuli and denied the effects it had on their performance.

Review of the literature thus far provides support for the existence of unconscious intuitive processes and outlines the impact it has on behavior and decision-making. Interestingly, the literature suggests that when provided with an opportunity to rationalize behaviors and choices, participants are unaware of the influences of unconscious stimuli. In short, people are unaware and unsure of why they do the things they do. These findings have vast implications for the field of vocational psychology and for the delivery of career related assessments and interventions, which overemphasize the role of introspection and conscious processing in decision-making. Some theorists assert that unconscious processing conserves more energy, and thus is more efficient at decision-making. This would suggest that career counselors limiting career-related interventions to solely depend on conscious and rational processes might unintentionally encourage clients to make important life choices (e.g., college major, career choice) without adequate information.

Trilateral Model of Adaptive Career Decision-Making and Occupational Engagement

A model that responds to the anti-introspection argument and advocates for career adaptability is the Trilateral Model of Adaptive Career Decision-Making (Krieshok, 2001; Krieshok, Black, & McKay, 2009). As its name suggests, the model is comprised of three parts: (1) rationality, (2) intuition, and (3) occupational engagement. Krieshok and colleagues posit that optimal career choices are a result of the accumulation of experience and information, both of which rely on an individual's ability to balance intuitive and rational sources of information. These researchers state that "career-decision makers who recognize the limits of rational and intuitive processing can arrive at a relatively optimal quality of decision making as a result of ongoing focused contact with the people and the world around them" (Krieshok et al., 2009, p.

10). They propose that by continuously participating in novel behaviors, individuals gain more information about the world of work and develop a more extensive fund of experience on which to base career decisions. Researchers coined this construct *occupational engagement* and construe it as a vehicle to develop accurate and adaptive vocational self-schemas.

Occupational engagement increases awareness via experiential activities and is different from other behaviorally-oriented vocational interventions in that it advocates for ongoing and continuous behavior. Unlike Super's developmental concept of Exploration (Watts, Super, & Kidd, 1981) which begins during adolescence and ends at early adulthood, occupational engagement has no endpoint and is not accomplished when a person reaches a final decision or conclusion. Occupational engagement involves a continuous pursuit of information, the goal of which is to increase career adaptability, even when work transitions are not imminent. Krieshok (2001; Krieshok, Black, & McKay, 2009) describes Super's Exploration as a *state* activity, whereas occupational engagement is viewed as a *trait* activity. Ultimately, by continuously engaging in experiential activities, individuals are able to make optimal career-related decisions based in both rationality and intuition. This, in turn, would assist individuals to develop an accurate and adaptive vocational self-schema and better prepare him or her for the unpredictable nature of today's world of work. Krieshok et al. (2009) asserted that the byproduct of being occupationally engaged would result in the following individual attributes:

(a) is persistently engaged, accepting that career decision-making is an enduring process and that vocational security is illusory, (b) does not rely exclusively on innate talents, but rather seeks to compensate for deficits to become a competent generalist, (c) is wary of specialization and how it can narrow vocational options, (d) is a life-long learner and integrates new knowledge with what he or she already knows, (e) cultivates a sense of

foresight in respect to trends in the field as a result of persistent engagement, learning, and integrating new knowledge, (f) is never completely foreclosed, (g) is flexible and willing to act despite fears, (h) regularly questions his or her perceptions of the vocational reality with which he or she is faced, (i) is aware of the limits of reason and intuition and seeks to manage biases and heuristics, and (j) has an existential/Zen outlook that affords numerous advantages, including an essential trust in the universe that allows him or her to see beyond appearances and transform seemingly threatening problems into opportunities. (p. 32)

Occupational Engagement: Research and Assessment

Researchers have developed several instruments in attempts to measure the construct of occupational engagement. The original scale was a self-report measure created by a research team familiar with Krieshok's Trilateral Model and consisted of 29 face-valid items scored on a six-point Likert Scale. Example items included "getting a part time or summer job" and "regularly attending lectures on campus." Responses were modeled after the five stages of the Stages of Change Model (Prochaska, DiClemente, & Norcross, 1992); for example, "I've never given any thought to this" (Precontemplation), and "I've been doing this for more than one month" (Maintenance).

The first study by Black (2006) sought to establish a reliable measure of occupational engagement among college students and to examine its relation to vocational identity and to rational/intuitive thinking styles via the Vocational Identity Scale (VIS; Holland, Gottfredson, & Power, 1980) and the Rational-Experiential Inventory (REI; Pacini & Epstein, 1999). The research sample consisted of 79 students and data analyses yielded a coefficient alpha of .86 after 11 of the original 29 items were dropped. As expected, the scores on the instrument

demonstrated a positive relationship with the VIS ($r = .22$) and with the Rational scale of the REI ($r = .24$). Interestingly, scores on Black's (2006) occupational engagement scale did not show a positive correlation with the Experiential subscale of the REI. The survey, then titled the Occupational Engagement Scale - College (OES-C), and subsequent research findings were presented at a national conference (Conrad, Syme, Sharma, & Wells, 2007) and sparked several further studies. These events were the catalyst for future revisions of the OES-C and for studies with various populations including employed adult workers, military personnel and veterans, high school students, and creative and gifted individuals.

Since its conception, researchers have attempted to examine occupational engagement and its relation to various constructs, including individual personality characteristics, vocational identity assessments, and academic success (Black, 2006; Cox, 2008; McKay et al., 2008; Noble, 2008). Conclusions drawn from these studies demonstrate that occupational engagement positively correlates with Openness to Experience and Extraversion in creative adolescents (McKay et al., 2008), with college grade-point average and well-being in college students (Cox, 2008), and with education and earnings in employed adults (Noble, 2008). Kerr and McKay (2007) identified four factors they termed (1) Networking, (2) Attunement, (3) Flexibility, and (4) Enrichment. Their study yielded a 24-item survey, which overlapped with some, but not all of the theoretical conceptions of occupational engagement.

Rationale for Investigating Minority Populations

Instruments developed from the studies outlined above were derived from exceptionally homogenous samples and are unrepresentative of many ethnic minority groups. For example, a recent study by Cox (2008) examining the correlation between occupational engagement and academic success in college students included 311 participants, only 13% of which identified as

being an ethnic minority. With any promising and emerging theory in the field, it is important to examine its applicability to diverse populations. A goal of the current study is to develop a psychometrically sound and multi-culturally sensitive instrument in line with the theoretical conceptions of occupational engagement outlined by Krieshok's (2001) initial proposal. In attempts to provide further validation of the OES and a more comprehensive understanding of occupational engagement in college students, this study was designed to examine the construct across majority and minority groups. More specifically, the researcher examined how the construct of occupational engagement manifests in Asian American college students, as well as how traditional Asian values and acculturation relate with occupational engagement in Asian American college students.

Asian Americans and Vocational Psychology

Historically, career development theories and interventions have examined individualistic variables (e.g., motivation, internal locus of control, perseverance, ability) and emphasized their contributions in shaping one's career. Though individual control and characteristics play a vital role in determining future aspirations, research examining contextual factors has largely been ignored in the United States (Niles & Harris-Bowlsbey, 2005). A comparative study investigating the approaches of the United States and the United Kingdom to vocational psychology revealed that Western psychologists have generally underemphasized contextual factors such as racism, sexism, socioeconomic status, ageism, and heterosexism. A common belief, especially among Western cultures is that "the individual controls his or her own career destiny" (Watts, Super, & Kidd, 1981). Gysbers, Heppner, and Johnston (2003) corroborated Watts' and colleagues' findings and pointed out that career interventions in the United States tend to favor five tenets reflecting a predominantly European-American perspective: (a)

individualism and autonomy, (b) affluence, (c) structure of opportunity open to all, (d) the centrality of work in people's lives, and (e) the linearity, progressiveness, and rationality of the career development process.

The tenets posited by Gysbers and colleagues (2003) are not representative of the worldviews and experiences of many people residing within the United States' borders. Approximately 600,000 legal and illegal immigrants annually entered the United States in the last two decades of the 20th century, at least two-thirds of which are estimated to join the labor force (Johnston & Packer, 1987). According to the United States Census (2010), Asian Americans represent approximately 4.8% of the United States population and are the largest growing racial group in the United States. Researchers have estimated that the Asian population in the United States will approximate 60 million by the year 2050 (Sue, 1994; Sue & Sue, 1999).

The changing demographic of the American workforce has considerable implications for the future of vocational psychology. Leong and Brown (2005) contend that traditional theories, interventions, and assessments may not be applicable to diverse populations, and to regard these theories as appropriate for all clients would be premature. Swanson (1993) asserted that a raised awareness of the importance of culture and how it influences career choices needs to be integrated into contemporary models of career theory.

Acculturation has been found to be an important variable in influencing the career behavior of minority groups. According to Stein (1975), acculturation is described as the process of adopting cultural traits or social patterns of another group. Early models of acculturation reflected an "either/or" perspective, in which individuals either accepted the "new" culture and rejected the "old," or vice versa (Park & Burgess, 1921). More contemporary models of acculturation reflect a more bicultural perspective. In contrast to the early "either/or" models of

acculturation, recent models articulate a “both/and” approach, where the bicultural person “feels committed to both cultures and selectively embraces the positive aspects of each” (Atkinson, Morten, & Sue, 1993). An individual’s level of acculturation can significantly differ from person to person and influence his/her decisions regarding work. Differences in acculturation are important factors that must be addressed, especially for individuals attempting to formulate occupational preferences (Niles & Harris-Bowlsbey, 2005).

Though research on the career development of Asian Americans is scant, acculturation is the most widely investigated career-related variable among this population (Leong, 2001). Leong and Chou (1994) noted that Asian Americans with lower levels of acculturation (i.e., those who are more oriented toward traditional Asian values) prefer occupations in science and engineering, whereas those individuals with higher levels of acculturation (i.e., those more oriented to Western values, or those who are equally oriented to both Asian and Western values) have a wider range of occupational preferences. Leong (2001) also noted that Asian Americans with higher levels of acculturation endorse higher levels of job satisfaction, overall well-being, and have better performance ratings from their supervisors.

Other investigations of Asian American career development have examined the influences of traditional Asian values on career-related decisions. For example, Tang, Fouad, and Smith (1999) found that the opinions of family members were more influential on decision-making in Asian Americans than were individual interests. These researchers attribute their findings to the value of collectivism, which they defined in their study as “the seeking of input on choices from others and not relying solely on self-interests” (p. 366). Mau (2000) validated these suggestions and observed that Asian Americans prefer a more dependent decision-making style when choices regarding professions are imminent. Other research investigations revealed

that Asian Americans have a low tolerance for ambiguity, are less autonomous, and prefer direct and structured career interventions (Leong, 1991, Leong & Gim-Chung, 1995; Leung, Ivey, & Suzuki, 1994).

Given that the construct of occupational engagement calls for individuals to participate in novel behaviors and experiences which foster autonomy, independent decision-making, and ambiguity, it is unclear how occupational engagement applies to the career behaviors of Asian Americans. By examining occupational engagement in a majority sample and minority sample consisting of Asian American college students, this study sought to shed light on how this construct manifests across cultures.

Dissertation Goals and Hypotheses

The current study addressed the following goals and research hypotheses and questions based on the literature review:

Goal 1. Examine whether or not occupational engagement manifests differently for Asian Americans and Caucasian American college students.

Hypothesis 1: The Occupational Engagement Scale - College Student (OES-CS) will reflect a factor structure that differs between the Asian American and Caucasian American college student populations.

Goal 2. Observe the relationship between occupational engagement and grade point average in Asian Americans and Caucasian American college students.

Hypothesis 2: The relationship between occupational engagement and grade point average will reflect a positive correlation among both Asian American and Caucasian American college students.

Goal 3. Depending on the results of Goal 2, develop a new instrument that better reflects occupational engagement in Asian American and Caucasian American college students.

Goal 4. Examine the relationship between life satisfaction, Asian cultural values, and the newly developed Occupational Engagement Scale-Asian Americans (OES-AA).

Hypothesis 3: The relationship between occupational engagement and life satisfaction will reflect a positive correlation among Asian American college students.

Hypothesis 4: The relationship between Asian Americans' occupational engagement and Asian values will reflect a negative correlation.

Hypothesis 5: The relationship between Asian Americans' occupational engagement and level of acculturation will reflect a positive correlation.

CHAPTER 3

Methodology

The current study has four overarching general research questions. The first, can a multidimensional, psychometrically sound, and culturally sensitive scale of occupational engagement be developed with an Asian American sample? Secondly, does occupational engagement manifest itself similarly in Asian American and Caucasian American college students? Thirdly, what is the relationship between occupational engagement and Asian cultural values for the Asian American sample? And lastly, does occupational engagement positively correlate with life satisfaction and GPA in Asian American college students in the same manner as it does with Caucasian American college students? The following section outlines the participants, instruments, procedures, and data analyses included in the present study.

Participants

The target populations for the current study are English proficient, Asian American and Caucasian American college students currently enrolled in United States. With regard to statistical power, Tabchnick and Fidell's (2007) recommendation of sampling a minimum of 300 participants for a sound factor analysis was used. The current study consists of two factor analyses, and therefore an attempt was made to include 600 participants, 300 Asian American and 300 Caucasian American college students. In total, 570 undergraduate and graduate college students participated in the study.

Of the 570 participants, 300 identified as being Asian or Asian American. Asian participants ranged in ages from 18 to 43 year old ($M = 21$, $SD = 2.77$). Fifty-seven percent of the Asian participants ($n = 170$) were women and 43% ($n = 130$) were men. Approximately 22% ($n = 67$) of the Asian participants were freshmen, 23% ($n = 70$) were sophomores, 24% ($n = 72$)

were juniors, 17% ($n = 50$) were seniors, and 14 % ($n = 41$) of the participants were enrolled in graduate studies. Forty-eight percent ($n = 144$) of the participants were first-generation college students and the remaining 52% ($n = 156$) reported that at least one parent had attended college. Of the 300 Asian participants, approximately 10% ($n = 29$) indicated that they were International/non-US citizen students. In terms of race/ethnicity 30% ($n = 89$) of the Asian participants identified as being Chinese, 9% ($n = 28$) as being Filipino, 12% ($n = 37$) as being Indian, 2% ($n = 5$) as being Malaysian, 11% ($n = 34$) as being Vietnamese, 1% ($n = 2$) as being Cambodian, 6% ($n = 19$) as being Korean, 7% ($n = 22$) as being Japanese, less than 1% ($n = 1$) as being Thai, and 21% ($n = 63$) of the Asian participants identified as being of another Asian race/ethnicity or as being multi-ethnic Asian.

The remaining 270 participants included in the study identified as being White, Caucasian American, or European American. Caucasian participants ranged in ages from 18 to 31 years old ($M = 20$, $SD = 1.84$). Fifty-nine percent of the White participants ($n = 160$) were women and 41% ($n = 110$) were men. Approximately 34% ($n = 92$) of these participants were freshmen, 20% ($n = 53$) were sophomores, 22% ($n = 59$) were juniors, and 24% ($n = 66$) were enrolled as seniors in college. Fourteen percent ($n = 39$) of the White participants were first-generation college students and approximately 2% ($n = 4$) reported that they were International/non-US citizen college students.

Instrumentation

The instruments used in the current study measure the constructs of occupational engagement, life satisfaction, Asian values, and level of Western/American acculturation. In addition, an instrument assessing the aforementioned demographic information including the participants' college major and current college grade point average (GPA) were included (See

Appendices A through E).

Participant demographic information. All participants completed a demographic questionnaire (see Appendix A) that assessed the following information: age, gender, race/ethnicity, college major, year/status in college (i.e., freshman, sophomore, etc.), college grade point average (GPA), first-generation college student status, and US-citizenship status. Participants who identified as being Asian or Asian American answered additional demographic questions inquiring about their specific ethnicity (i.e., Chinese, Vietnamese, Korean, etc.).

Occupational engagement. The Occupational Engagement Scale – College Student (OES-CS) is an instrument based on the Trilateral Model of Adaptive Career Decision-Making (Krieshok, Black, & McKay, 2009). The OES-CS (see Appendix B) was developed by Krieshok and a taskforce of counseling psychology graduate students and is intended to measure the construct of occupational engagement in a college sample. The OES-CS contains 57 face valid items and incorporates all 24 items found in Black’s (2006) OES-C. In addition, 33 new items that are thought to conceptually fit with the Trilateral Model were included. Previous items were also reworded to increase participant clarity and to gauge more behavioral responses in line with the trilateral model.

Response options were also revised in the OES-CS. Former versions of the OES utilized a rating scale ranging from 1 - 6 (1 = *I’ve never given any thought to doing this*; 6 = *I do quite a bit of this – or – I’ve been doing this for quite a while*). In attempts to simplify responses and to reduce participant confusion, the OES-CS utilizes a rating scale ranging from 1 - 5 (1 = *Not at All Like Me*; 3 = *Somewhat Like Me*; 5 = *Very Much Like Me*).

Life satisfaction. The Satisfaction With Life Scale (SWLS) is a five-item measure developed to assess global life satisfaction. The SWLS (Diener, Emmons, Larsen, & Griffin,

1985) was created in response to the overwhelming number of single-itemed life satisfaction scales targeting specific populations and age groups. The SWLS (see Appendix C) consists of five items scored with a rating scale ranging from 1 - 7 (1 = *strongly disagree*; 7 = *strongly agree*). The sum of items yields a total score with higher totals indicating higher satisfaction with life and lower totals indicating less satisfaction with one's current life.

The SWLS was normed on a sample of 176 undergraduate students from the University of Illinois, and later with a sample of 53 patients at an inpatient geriatric setting. The instrument has demonstrated reasonable psychometric properties with internal consistency estimates equaling .87, and a two-week test-retest coefficient equaling .83 (Diener et. al, 1985). The SWLS has been shown to positively correlate with other assessments of subjective well-being, and to negatively correlate with measures of negative affect and distress (Pavot & Diener, 1993).

Asian values. The Asian Values Scale (AVS) is designed to assess adherence to Asian cultural norms and values (Kim, Atkinson, & Yang, 1999). Researchers criticized the overemphasis of similar surveys assessing and interpreting behavioral aspects (e.g., food preference and language usage) as measurements of Asian values, and in response, created an instrument with items focusing more on the values of Asian culture. The AVS is a 24-item instrument (see Appendix D) utilizing a rating scale ranging from 1 - 7 (1 = *Strongly Disagree*; 7 = *Strongly Agree*).

The AVS pilot instrument consisted of 112 items and was scored on a seven-point rating scale. The pilot instrument was administered to 366 Asian American and European American undergraduates. In attempts to determine which of 112 items were representative of Asian values, the researchers conducted an independent-samples t-test to identify those items that distinguished between first-generation Asian Americans and Caucasian Americans. The t-tests

resulted in a final 36-item survey then dubbed as the AVS. The 36-item instrument was then subjected to an exploratory factor analysis which yielded 24 items indicating six latent factors the test developers termed as: (1) Conformity to Norms, (2) Family Recognition Through Achievement, (3) Emotional-Self Control, (4) Collectivism, (5) Humility, and (6) Filial Piety.

The AVS demonstrated reliable internal consistency in its first trial, with coefficient alphas for the six factors equaling .77, .72, .52, .56, .55, and .44, respectively. Internal consistency was again demonstrated over four other separate trials, those with coefficient alphas ranging between .81 and .82. The instrument was also observed to be reliable over a two-week time frame with a coefficient of stability of .83. Authors of the AVS posit that the instrument, particularly when used in conjunction with other more commonly utilized behavioral measures of Asian values, can be a useful tool for examining the relationships between Asian Americans' values, acculturation, and other dependent variables of interest.

Asian acculturation. The Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA) was developed to assess Asian Americans' level of acculturation to Western culture (Suinn, Ahuna, & Khoo, 1992). The instrument (see Appendix E) was closely modeled after the Acculturation Rating Scale for Mexican Americans (Cuellar, Harris, & Jasso, 1980) and consists of 21 multiple-choice items measuring language (4 questions), friendship choice (4 questions), behaviors (5 questions), generation-geographic history (3 questions), identity (4 questions), and attitude (1 question). The SL-ASIA contains 21 items and when completed, yields an average score ranging from 1.00 to 5.00, with lower averages indicating high Asian identification and low acculturation to the majority culture, and higher averages reflecting high levels of acculturation and low levels of identification with Asian culture.

Three independent studies utilizing the SL-ASIA reported internal consistency estimates

of .88, .89, and .91 (Atkinson & Gim, 1989; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987; Suinn, Ahuna, & Khoo, 1992). A factor analysis identified five interpretable factors including: (1) reading/writing/cultural preference, (2) ethnic interaction, (3) affinity for ethnic identity and pride, (4) generational identity, and (5) food preference. Coefficient alphas for the SL-ASIA's five factors were not calculated; however, concurrent validity was established by noting a positive correlation between SL-ASIA scores and amount of time participants have resided within U.S. borders.

Procedures

After receiving human subjects' approval through the University of Kansas Institutional Review Board (see Appendix F), the author employed an online research organization, Qualtrics, to solicit and collect data from Asian participants matching the demographic inclusion criteria. The research company recruits respondents through two methods. The first is through self-registration through survey vendor homepages like Clearvoicesurveys.com, Surveyspot.com, and Globaltestmarket.com. The second is through proactive recruitment through third-party lists such as hotel VIP club members and airline frequent flier mile groups. Once prospective participants were identified, they were sent a link inviting them to participate in the current study.

Once the participants clicked on the link, they were presented with a cover letter briefly detailing the purpose of the study and requesting informed consent (see Appendix G). Participants were notified that the study would take approximately 25 minutes to complete, that participation was voluntary, that minimal risks were associated with completing the study, that their responses would remain anonymous and confidential, and that withdrawal from the study would not result in any negative consequences. Participants who completed the study received monetary compensation from Qualtrics.

Following the informed consent page, participants were presented with general directions for completing the assessments. Respondents were then taken through each instrument beginning with the Participant Demographic Questionnaire, the Occupational Engagement Scale – Student, the Satisfaction With Life Scale, the Asian Value Scale, and lastly the Suinn-Lew Asian Self-Identity Scale. Once a respondent completed the series of assessments, their scores were uploaded into a Microsoft Excel spreadsheet. Participants who did not respond to all items were excluded from the study. After responses from 300 Asian participants were collected, the researcher imported the data into the Statistical Package for the Social Sciences – Version 20.0 (SPSS 20) software for statistical analysis.

Data from the 270 White participants were obtained through an archived data set (Cox, 2008). Participants in Cox's research design were actively solicited from undergraduate courses at the University of Kansas. After seeking the instructors' permission, Cox and colleagues approached prospective participants and invited them to participate in the study. Participants who provided informed consent were presented with a packet of assessments that included the OES-CS, the SWLS, and a demographic questionnaire inquiring about age, gender, race/ethnicity, college major, year/status in college, college GPA, first-generation college student status, and US-citizenship status. For the current study, the researcher only utilized data from respondents who identified as being White, Caucasian American, or European American. Once those respondents were identified, the data were collected and entered into SPSS 20.0.

Data Analyses

The main objective of the analyses was to identify commonalities and differences in the internal structure of the OES-CS items with an Asian American and Caucasian American sample. In addition, the analyses examined correlations between the construct of occupational

engagement with Asian values, Asian level of acculturation, college GPA, and with subjective life satisfaction. The following section outlines pertinent steps in the data analyses and includes the rationale for each statistical procedure chosen.

Data entry. All statistical analyses were conducted using Microsoft Excel and SPSS 20.0 software. The researcher utilized Microsoft Excel to tabulate cumulative scores for the OES-CS, SWLS, and AVS. This step entailed recording 17 reversely scored items for the OES and 10 reversely scored items for the AVS. Six subscale scores for the AVS (Conformity to Norms, Family Recognition Through Achievement, Emotional-Self Control, Collectivism, Humility, and Filial Piety) were also calculated. An interpretable score for the SL-ASIA was calculated by dividing the sum of all items by 21. All of these figures were imported into SPSS 20.0 for statistical analyses.

Factor analyses of the OES-CS. Recommendations for initial scale development include generating a pool of relevant items, having items reviewed by a panel of experts, administering the items to an appropriately sized sample, and analyzing the items using a data reduction procedure (Lee & Lim, 2008). With regard to data reduction, the current study utilized an exploratory factor analysis (EFA). This procedure is encouraged when the researcher does not have a preconceived notion of how many factors are associated with the construct of interest (Lee & Lim, 2008).

Conducting an EFA involves a multi-step process where decisions are made regarding the extraction model, rotation, and number of factors to interpret. First, to determine the appropriate extraction model, the researcher analyzed the distribution of the OES-CS total scores. A descriptive analysis, which included a histogram, reviewed two components of the data distribution: (1) kurtosis, and (2) skewness. The extraction model for the EFA could use either

the maximum likelihood extraction model, if data are relatively normally distributed, or the principle axis factor model of extraction, if the data are distributed significantly unequally (Costello & Osborne, 2005).

Once factors have been extracted, the researcher utilized an orthogonal rotation procedure, varimax method, to calculate the degree which items load onto each factor. SPSS 20.0 has three methods of orthogonal rotation including varimax, quartimax, and equamax. Quartimax rotation attempts to maximize the spread of factor loadings for an item across all factors, which often results in the majority of items loading onto only one factor (Field, 2005). Varimax is the opposite in that it attempts to load a smaller number of items highly onto each factor resulting in more interpretable clusters of factors. Equamax rotation is a hybrid of these two approaches and has been reported to behave fairly erratically (Tabachnick & Fidell, 2007). Field (2005) recommends utilizing the varimax rotation for a first analysis “because it is a good general approach that simplifies the interpretation of factors” (p. 637).

With regard to the number of factors to retain, the researcher did not retain all factors with eigenvalues greater than 1.0 for there is a general consensus among the field that “this is among the least accurate of methods” (Costello & Osborne, 2005, p. 2). Instead, the *scree test* (Cattell, 1966) was implemented as an alternative test for factor retention. This method is readily accessible in any statistical software or reference on the Internet, and involves examining graphs of the eigenvalues. The researcher examined the scree plot for the natural bend or breaking point in the data. The number of data points above the “break” indicated the number of factors to retain. Reliability coefficients were analyzed for each factor and those at or above .80 were sufficiently reliable for research purposes (Gall, Gall, & Borg, 2007). Items that cross loaded

onto two or more factors and items that were inconsistent or unlike other items within each factor were removed. Lastly, an OES total score was calculated by summing the remaining items.

Examination of OES-AA and OES-CA. Goal 1 of the current study was to determine whether occupational engagement manifests differently for Asian American and Caucasian American college students. To fulfill this goal and to test Hypothesis 1, exploratory factor analyses (EFA) utilizing the criteria mentioned above were conducted for both the Asian American and Caucasian American samples. Factors and items retained after each EFA resulted in a newly developed scale of occupational engagement. For the Asian American sample, the newly constructed scale was titled Occupational Engagement Scale-Asian American (OES-AA; see appendix H), and for the Caucasian American sample, the Occupational Engagement Scale-Caucasian American (OES-CA; see appendix I). The researcher performed a qualitative examination of the OES-AA and OES-CA factors to determine how these two scales vary and correspond.

Bivariate correlations with academic success. Goal 2 was to observe the relationship between college grade point average (GPA) and occupational engagement for Asian American and Caucasian American college students. Hypothesis 2 stated that occupational engagement, as measured by the OES-AA and OES-CA, would positively correlate with GPA for both samples. To test this assumption, the author conducted bivariate correlations between GPA and occupational engagement for Asian American and Caucasian American participants.

Creation of the OES-AA and OES-CA. Goal 3 of the current study was to develop, if necessary and depending on the results of Goal 2, new and separate instruments measuring occupational engagement in Asian American and Caucasian American college students.

Bivariate correlations with Asian cultural values. Goal 4 of the current study was to examine the relationship between subjective life satisfaction and Asian cultural values with occupational engagement for Asian American college students. Hypothesis 3 stated that life satisfaction would positively correlate with occupational engagement, Hypothesis 4 stated that Asian values would negatively correlate with occupational engagement, and Hypothesis 5 stated that level of acculturation would positively correlate with occupational engagement. To test these hypotheses, bivariate correlations were conducted between SWLS total scores, AVS total and subscale scores, SL-ASIA quotient scores, and OES-AA total and subscale scores.

CHAPTER 4

Results

The primary goal of the current study was to examine how the construct of occupational engagement manifests differently for Asian American and Caucasian American college students. The researcher hypothesized that the Occupational Engagement Scale - College Student (OES-CS), initially developed by Krieshok et al. (2009) would reflect a factor structure that differed between the Asian American and Caucasian American samples. To test this hypothesis, the researcher conducted two separate exploratory factor analyses (EFA). The following chapter outlines the results of each EFA and addresses the main goals and proposed hypotheses of the study.

Hypothesis One

The Occupational Engagement Scale - College Student (OES-CS) will reflect a factor structure that differs between the Asian American and Caucasian American college student populations.

Preliminary analysis. Prior to data analysis, inspection of missing values, outliers, and normality was conducted (Field, 2005; Tabachnick & Fidell, 2007). Participants with missing data from any instrument (e.g., OES-CS, SWLS, AVS, and SL-ASIA) were excluded from the study. Group mean scores were substituted for participants with missing grade point averages. Descriptive statistics and analyses indicated that all variables were normally distributed. Additionally, Cronbach's alphas for all scales were reviewed and reliabilities of measures were within acceptable ranges (see Table 1 for descriptive statistics, skewness, kurtosis, and Cronbach's alphas).

Table 1

Descriptive Statistics, Skewness, and Kurtosis for all Variables

	M	SD	Skewness	Cronbach's Alpha	Kurtosis
GPA Asian American	3.31	.59	-1.13		.14
GPA Caucasian American	3.08	.56	-.54		-.37
SWLS Asian American	21.45	6.70	-.31	.86	-.59
AVS-Conformity to Norms	32.06	7.43	-.02	.73	.24
AVS-Family Recognition through Achievement	13.28	3.52	.05	.78	-.75
AVS-Collectivism	14.04	3.30	-.07	.60	.16
AVS-Humility	16.81	3.29	-.75	.79	.29
AVS-Emotional Self-Control	13.19	2.93	-.07	.43	-.03
AVS-Filial Piety	18.12	4.39	.01	.51	-.83
AVS-Total	107.53	16.32	.29	.81	.37
SL-ASIA	3.15	.53	-.02	.87	.50

Note. GPA = Grade Point Average. SWLS = Satisfaction with Life Scale. AVS = Asian Values Scale. SL-ASIA = Suinn-Lew Asian Self-Identity Acculturation Scale.

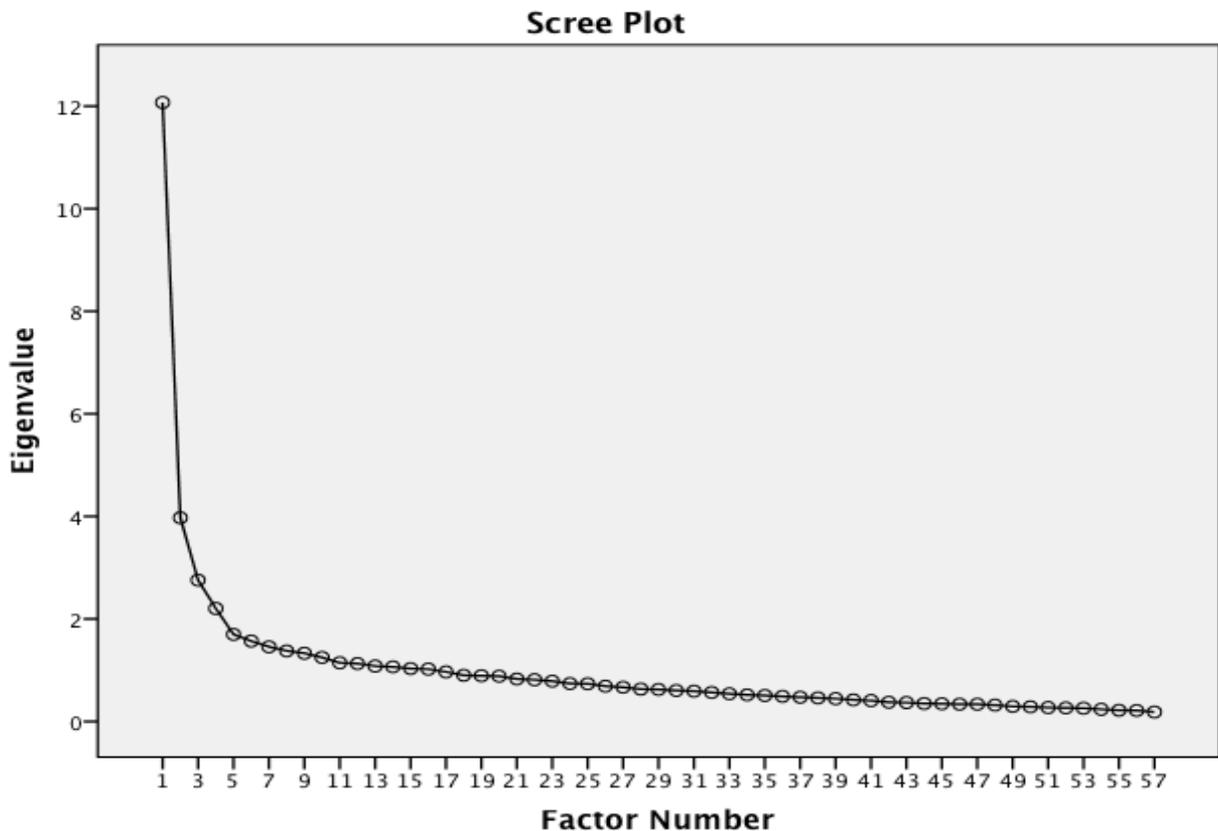
Occupational Engagement Scale-Asian American. With regard to the Asian American sample, the researcher utilized the maximum likelihood factor extraction method. The method of extraction was based on the normal distribution of data. Factors were extracted using a varimax rotation. Factorability was supported through Bartlett's test of sphericity ($\chi^2(1596) = 6542.92, p = .00$). Furthermore, the Kaiser-Meyer-Olkin measure of sampling adequacy was within an

acceptable range (KMO = .87), which suggests that the factor analysis should produce reliable and distinct factors.

When determining the number of factors to retain, the author used several models. First, the number of factors extracted based on eigenvalues > 1.0. Additionally, the author conducted a scree plot test (see Table 2). Using these criteria, four factors were initially found to explain 36.84% of the variance. The first factor explained 21.18% of the variance, the second factor explained 6.97% of the variance, the third factor explained 4.84% of the variance, and the fourth factor explained 3.87% of the variance. Goodness of fit was reported as $\chi^2(1374) = 2218.33, p = .00$.

Table 2

Scree Plot of OES Factors for Asian Americans



The four-factor solution was examined using a varimax rotation of the factor loading matrix. Factor one of this model consisted of 17 items and was found to have an internal reliability of $\alpha = .89$. Factor two consisted of 11 items with a reported internal reliability of $\alpha = .84$. Factor three consisted of seven items and factor four consisted of five items, with internal reliabilities of $\alpha = .63$ and $\alpha = -.22$, respectively (see Table 3 for reliability of scale scores). Based on these findings, only factors one and two were judged to be reliable. Thus, factors one and two were retained, explaining 23.00% of variance (see Table 4 for factors and items).

Table 3

Reliabilities of OES-AA Factor Scores

Scores	Cronbach's alpha
OES-AA Factor 1	.89
OES-AA Factor 2	.84
OES-AA Factor 3	.63
OES-AA Factor 4	-.22
OES-AA Total	.91

Note. OES-AA = Occupational Engagement Scale-Asian American.

Table 4

Factor loadings based on maximum likelihood analysis with varimax rotation for 28 items of the Occupational Engagement Scale-Asian American (OES-AA) (N = 300)

Items	Loadings
Factor 1	
1. I attend presentations or talks related to a career I might find interesting.	.638
2. I have contact with people working in fields I find interesting.	.604
3. I attend lectures, exhibits, and community events.	.601
4. I visit places I'm interested in working at so I can learn more about them.	.599
5. I am actively involved in groups or organizations.	.594
6. I work with teachers or staff on activities other than coursework (committees, orientation, student life activities, etc.).	.590
7. I take part in a variety of activities to see where my interests lie.	.550
8. I discuss my strengths and weaknesses with a teacher or mentor.	.542
9. I make connections with people who might be helpful to me later.	.524
10. I ask people in social settings about what they do for a living or what they are interested in doing.	.517
11. I volunteer in an area that I find interesting.	.503
12. I keep an eye on trends and events that might impact potential occupations.	.497
13. I tutor or teach other students.	.488
14. I gain hands on experience that I might use in the future.	.470
15. I keep my resume up to date.	.454
16. I have meaningful conversations with students of a different ethnicity.	.439
17. I talk about my career choices with family or friends.	.420
Factor 2	
18. I imagine how it might feel to do the kind of work I'm considering.	.678
19. I picture the kind of life I might have with a particular career.	.594
20. I notice how I feel in different work environments.	.584
21. I picture myself actually doing the kind of work I'm considering.	.573
22. I ask myself how well a particular career fits with who I am.	.538
23. I look for ways my strengths might apply to different kinds of work.	.535
24. I am aware of the educational requirements for a career that I find interesting.	.522
25. I picture how my life might branch out in unplanned directions.	.479
26. I just know when I encounter a situation worth pursuing.	.455
27. I keep an open mind about jobs I might apply for right out of school.	.423
28. I daydream about career possibilities.	.423

Note. Factor loadings < .4 are suppressed

During the analysis, several items were eliminated because their factor loading was less than .4 and cross-loadings were greater than .30. In total, 27 of the original 57 items were eliminated. Item 21 “I imagine what my future workplace might look like” had a cross-loading of .52 with factor 2 and .41 with Factor 4 and thus was discarded. Similarly, item 49 “I pursue opportunities in life because I just know they will come in handy” was also discarded due to having a cross-loading of .43 with Factor 1 and .50 with Factor 2. In addition, item 56 “I do lots of things that are interesting to me” and item four “I read about careers I find interesting” were eliminated because these items were conceptually inconsistent with the structure of Factor 2.

The two factors were analyzed for their content, and two themes emerged. The first factor consists of items representing behavioral strategies that either increases opportunities to gain knowledge and information, or strategies that narrow and strengthen preexisting career interests. These items are consistent with Krieshok’s (2009) Trilateral Model of Adaptive Career Decision-Making and are in line with occupational engagement’s underlying constructs of *Exploration* and *Enrichment* (Conrad et al., 2007). Exploration is defined as the process of accruing information in order to narrow career interests with a specific endpoint in mind, while enrichment is a continual process of increasing career interests through enriching behaviors. Given that the items in Factor 1 all include behavioral strategies that target to expand the individual’s knowledge about himself or herself and their relation to the world of work, it was titled Behavioral Exploration and Enrichment (17 items; accounting for 12.53% of the variance).

Similar themes emerged in the second factor with the exception that all of the items represented mental and cognitive strategies that increased knowledge about oneself and work. Sample items included “I picture the kind of life I might have with a particular career,” “I ask myself how well a particular career fits with who I am,” and “I keep an open mind about jobs I

might apply for right out of school.” Underlying themes of reflection, emotional self-awareness, life planning, and mental flexibility emerged. The researcher dubbed the second factor Cognitive Exploration and Enrichment (11 items; accounting for 10.47% of variance.)

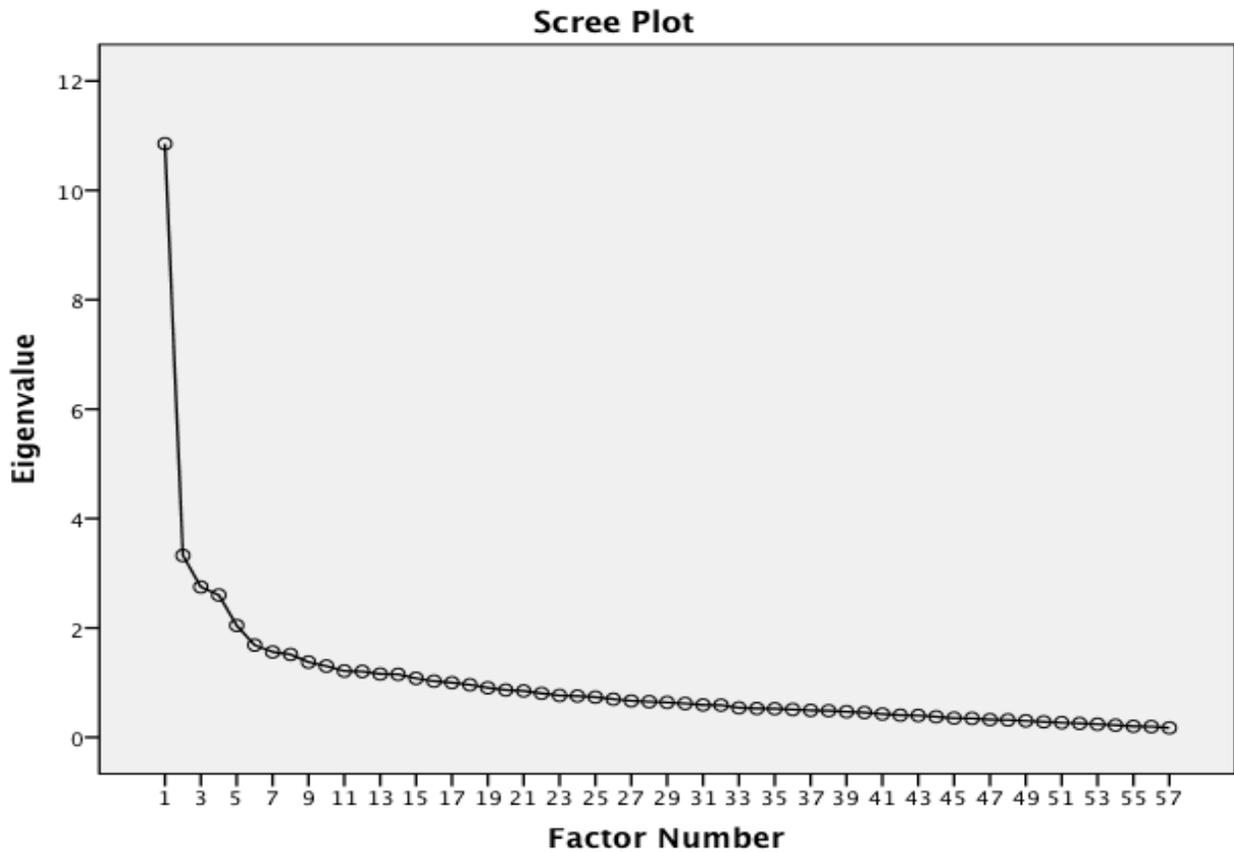
In sum, factor analysis of OES scores with the Asian American college sample revealed a two-factor structure consisting of 28 items. The first factor titled Behavioral Exploration and Enrichment, contains 17 items, accounted for 12.53% of variance in the sample, and included behaviors that aim to expand and/or solidify one’s career options. The second factor titled Cognitive Exploration and Enrichment, contains 11 items, accounted for 10.47% of variance in the sample, and includes cognitive strategies of self-observation, emotional insight, and open-mindedness.

Occupational Engagement Scale-Caucasian American. The maximum likelihood factor extraction method and a varimax rotation were also used when examining the factor structure of the OES for the Caucasian American sample. These methods were determined based on the normal distribution of data. Factorability was supported through Bartlett’s test of sphericity ($\chi^2(1596) = 5582.59, p = .00$) and a Kaiser-Meyer-Olkin measure of sampling adequacy of .84.

When determining the number of factors to retain, factors were extracted based on eigenvalues > 1.0 and visual examination of the scree plot (see Table 5). Based on these criteria, five factors were initially found to explain 37.85% of the variance. The first factor explained 19.04% of the variance, the second factor explained 5.83%, the third factor explained 4.82%, the fourth factor 4.56%, and the fifth factor accounted for 3.59% of the variance. Goodness of fit was reported as $\chi^2(1321) = 1924.68, p = .00$.

Table 5

Scree Plot of OES Factors for Caucasian Americans



The five-factor solution was examined using the varimax rotation method. Factor one of the rotated model consisted of nine items and was found to have an internal reliability of $\alpha = .84$. Factor two consisted of 11 items with a reported internal reliability of $\alpha = .79$. Factor three consisted of five items, factor four consisted of four items, and factor five consisted four items, with reported Cronbach's alphas of $\alpha = .73$, $\alpha = .73$, and $\alpha = .49$, respectively (see Table 6 for reliability of scale scores). Based on these findings, only factors one and two were judged to be reliable. Thus, factors one and two were retained, explaining 16.59% of variance (see Table 7 for factors and items), and factors three through five were discarded.

Table 6

Reliabilities of OES-CA Factor Scores

	Scores	Cronbach's alpha
OES-CA Factor 1		.84
OES-CA Factor 2		.79
OES-CA Factor 3		.73
OES-CA Factor 4		.73
OES-CA Factor 5		.49
OES-CA Total		.86

Note. OES-CA= Occupational Engagement Scale-Caucasian American.

Table 7

Factor loadings based on maximum likelihood analysis with varimax rotation for 20 items of the Occupational Engagement Scale-Caucasian Americans (OES-CA) (N = 270)

Items	Loadings
Factor 1	
1. I picture myself actually doing the kind of work I'm considering.	.752
2. I imagine how it might feel to do the kind of work I'm considering.	.653
3. I picture that kind of life I might have with a particular career.	.645
4. I ask myself how well a particular career fits with who I am.	.600
5. I imagine what my future workplace might look like.	.543
6. I notice how I feel in different work environments.	.486
7. I am aware of the educational requirements for a career that I find interesting.	.452
8. I talk about my career choices with family or friends.	.452
9. I haven't given much thought to my future experiences at work.	.409
Factor 2	
10. I have contact with people working in fields I find interesting.	.548
11. I have not talked with people working in my field of interest.	.530
12. I don't have much volunteer experience.	.511
13. I avoid talking to teachers outside of class.	.504
14. I volunteer in an area that I find interesting.	.498
15. I seldom discuss my career plans with a teacher, advisor, or counselor.	.478
16. I gain hands on experience that I might use in the future.	.458
17. I don't often discuss ideas from readings or classes with others outside of class (students, family members, coworkers, etc.).	.442
18. I am actively involved in groups or organizations.	.437
19. I can succeed in my field without talking to people who work in it.	.437
20. I tutor or teach other students.	.432

Note. Factor loadings < .4 are suppressed

During the analyses, several items were discarded due to a having a factor loading less than .40 or having a cross loading greater than .30. In total, 36 of the original 57 items were removed due to a factor loading $< .40$. Item 16, “I am fixed on my career path,” had a cross loading of -0.48 with Factor 1 and $.57$ with Factor 5 and therefore was discarded. The remaining two factors and their contents were examined for central themes.

The nine items included in Factor 1 represented cognitive strategies that increased knowledge about oneself and one’s relation to work by envisioning one’s fit within different work environments and the resulting life that ensued. Sample items include “I picture myself actually doing the kind of work I’m considering,” “I ask myself how well a particular career fits with who I am,” “I imagine how it might feel to do the kind of work I’m considering,” and “I picture that kind of life I might have with a particular career.” Underlying themes of foresight, life planning, and emotional awareness emerged. The researcher also titled this construct Cognitive Exploration and Enrichment (nine items; accounting for 8.50% of variance).

Factor 2 consisted of items that represent experiential strategies that the individual participated in or didn’t participate in order to validate and narrow preexisting career interests. Sample items included “I have contact with people working in fields I find interesting,” “I can succeed in my field without talking to people who work in it,” “I gain hands on experience that I might use in the future,” and “I volunteer in an area that I find interesting.” Latent themes of insight, determination, and confidence surfaced. The author titled Factor 2 Behavioral Exploration and Enrichment (11 items, accounting for 8.10% of variance). Taken together, the two factors of the OES-CA contain 20 items that accounted for approximately 17% of variance in this sample.

Comparison of OES-AA and OES-CA. Composite scores were generated for each factor and the total scale for both Asian American and Caucasian American samples. Higher values indicated greater occupational engagement. Descriptive statistics are presented in Table 8. The skewness and kurtosis of OES-AA and OES-CA total scale scores were within a tolerable range, and examinations of histograms suggested a normal distribution. Analyses indicated that two distinct factors were underlying both Asian American and Caucasian American occupational engagement and these factors were internally consistent. Results also identified 11 common items found between the two instruments (see appendix J). Notably, findings fully support the researcher’s primary hypothesis that the OES-CS would reflect a factor structure that differed between the Asian American and Caucasian American college student samples.

Table 8

Descriptive Statistics, Skewness, and Kurtosis for OES-AA and OES-CA Variables

	M	SD	Skewness	Cronbach’s Alpha	Kurtosis
OES-AA Factor 1	56.03	12.29	-.06	.89	-.11
OES-A Factor 2	40.78	6.89	-.31	.84	.49
OES-AA Total (28-item)	96.80	17.22	-.01	.91	.15
OES-CA Factor 1	27.92	5.57	-.67	.84	.16
OES-CA Factor 2	27.28	7.58	.06	.79	-.41
OES-CA Total (20-item)	55.20	11.50	-.18	.86	-.25

Note. OES-AA = Occupational Engagement Scale-Asian American. OES-CA= Occupational Engagement Scale-Caucasian American.

Hypothesis 2

The author proposed to observe the relationship between occupational engagement and indicators of grade point average for Asian American and Caucasian American college students. The second hypothesis held that the relationship between occupational engagement and grade point average (GPA) will reflect a significant positive correlation among both Asian American and Caucasian American college students. Tables 9 and 10 display intercorrelations among all variables included in this study. Results partially supported this hypothesis. With regard to the Asian American sample, a significant positive correlation was found between the OES-AA total score and GPA ($r = .19$). A significant positive relationship was also found between the OES-AA Factor 1 (behavioral) score and GPA ($r = .22$), however, no significant relationship was found between the OES-AA Factor 2 (cognitive) score and GPA ($r = .09$).

For the Caucasian American sample, the OES-CA total score was significantly positively correlated with GPA ($r = .30$). The OES-CA Factor 1 and OES-CA Factor 2 also significantly positively correlated with GPA, $r = .21$ and $r = .31$, respectively.

Table 9

Intercorrelations Between Variables among Asian American Sample

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 OES—AA Factor 1													
2 OES—AA Factor 2	.58**												
3 OES—AA Total	.95**	.81**											
4 GPA	.22**	.09	.19**										
5 SWLS	.43**	.24**	.40**	.19**									
6 AVS— Conformity	.16**	-.01	.11	-.07	.10								
7 AVS— Family	.13*	.14*	.15*	-.10	.30**	.41**							
8 AVS— Emotion	.30**	.10	.25**	.12*	.56**	.21**	.07						
9 AVS— Collectivism	.23**	.05	.18**	.07	.19**	.33**	.04	.34**					
10 AVS— Humility	.20**	.32**	.27**	.12*	.15**	.19**	.13*	.16**	.38**				
11 AVS— Filial Piety	.06	.19**	.12*	-.18	.03	.39**	.45**	-.12*	.05	.22**			
12 AVS Total (24)	.20**	.16**	.21**	.09	.11	.84**	.57**	.26**	.51**	.49**	.62**		
13 SL-ASIA (Quotient)	-.04	.11	.02	-.09	.04	-	-.04	-.10	-.07	.11*	-.01	-	.14*
						.23**							

Notes. * $p < .05$, ** $p < .01$. OES—S AA = Occupational Engagement Scale Asian Americans. OES—S = Occupational Engagement Scale. GPA = Grade Point Average. SWLS = Satisfaction with Life Scale. AVS = Asian Values Scale. SL-ASIA = Suinn-Lew Asian Self-Identity Acculturation Scale.

Table 10

Intercorrelations Between Variables among Caucasian American Sample

	1	2	3
1 OES—CA Factor 1			
2 OES—CA Factor 2	.52**		
3 OES—CA Total	.83**	.91**	
4 GPA	.21**	.31**	.30**

Notes. * $p < .05$, ** $p < .01$. OES-CA = Occupational Engagement Scale-Caucasian American. GPA = Grade Point Average.

Hypothesis 3

The author examined the relationship between life satisfaction, Asian American cultural values, and the newly developed OES-AA. The third hypothesis posed that similar to that found in a predominantly Caucasian sample (Cox, 2008), the relationship between Asian Americans' occupational engagement and life satisfaction would reflect a significant positive correlation. Results fully supported this hypothesis. Significant positive correlations were found between subjective life satisfaction and the OES-AA Factor 1 ($r = .43$), OES-AA Factor 2 ($r = .24$), and OES-AA total score ($r = .40$).

Hypothesis 4

Hypothesis 4 proposed that Asian American college students' occupational engagement and Asian values would reflect a significant negative correlation. Findings did not support this hypothesis. A significant positive correlation was found between the OES-AA total score and Asian values ($r = .21$). Specifically, the OES-AA total score significantly positively correlated with Family Recognition Through Achievement ($r = .15$), Emotional Self-Control ($r = .25$),

Collectivism ($r = .18$), Humility ($r = .27$), and Filial Piety ($r = .12$). The total OES-AA score did not significantly correlate with Conformity to Norms ($r = .11$).

Moreover, significant positive correlations were found between the OES-AA Factor 1 and Conformity to Norms ($r = .16$), Family Recognition Through Achievement ($r = .13$), Emotional Self-Control ($r = .30$), Collectivism ($r = .23$), and Humility ($r = .20$). However, no significant relationship was found between the OES-AA Factor 1 and Filial Piety ($r = .06$). The OES-AA Factor 2 was found to have significant positive relationships with Family Recognition Through Achievement ($r = .14$), Humility ($r = .32$), and Filial Piety ($r = .19$). No significant relationship was found with the OES-AA Factor 2 and Conformity to Norms ($r = -.01$), Emotional Self-Control ($r = .10$), or Collectivism ($r = .05$).

Hypothesis 5

The fifth hypothesis posited that the relationship between Asian Americans' occupational engagement and level of acculturation would reflect a significant positive correlation. Results did not support this hypothesis. Findings yielded nonsignificant and positive correlations between the OES-AA total score ($r = .02$), OES-AA Factor 1 ($r = -.04$), and OES-AA Factor 2 ($r = .11$) and Asian American acculturation.

CHAPTER 5

Discussion

The present study sought to examine the cross-cultural validity of the Occupational Engagement Scale - College Student (OES-CS) designed to measure the construct of occupational engagement among college students. More specifically, the author investigated whether or not occupational engagement manifested differently between two culturally distinct samples, Caucasian Americans and Asian Americans, and examined the relationship between occupational engagement and various factors (e.g., GPA, cultural values, acculturation) to observe the manner in which occupational engagement is associated with individual psychosocial outcomes. In short, results yielded two different OES scales, and initial evidence for the newly developed Occupational Engagement Scale-Asian American (OES-AA) and Occupational Engagement Scale-Caucasian American (OES-CA) was assessed. Additionally, relationships were assessed between the construct of occupational engagement and Asian values, Asian level of acculturation, college GPA, and subjective life satisfaction.

The current study utilized a quantitative, non-experimental research design to address the study's research questions and hypotheses. In general, findings supported the majority of the researcher's hypotheses. This chapter provides a summary and discussion of the study's findings, followed by limitations of the current study and implications for future research.

Hypothesis 1

Hypothesis 1 stated that the OES-CS, initially developed by Krieschok et al. (2009), would reflect a multidimensional factor structure that differed between the Asian American and Caucasian American samples. Support for this hypothesis was found by performing two separate exploratory factor analyses (EFA) for the Asian American and Caucasian American college

students. Examination of the OES-AA and OES-CA's factor structure demonstrated two unique factors for each instrument.

For the Asian American sample, an exploratory factor analysis initially resulted in a four-factor structure. After utilizing the maximum likelihood factor reduction and varimax rotation methods, which was based on the distribution of scores and eigenvalues, a two-factor structure remained explaining 23% of the variance. This finding suggests that the construct of occupational engagement is best captured by two separate but related sets of behaviors.

Examination of the OES-AA Factor 1 items revealed a central theme of behavioral interventions that either narrowed and strengthened preexisting career interests or increased opportunities to increase knowledge and information. Further, Factor 1 of the OES-AA is consistent with occupational engagement's underlying concepts of *Exploration* and *Enrichment* (Krieshok et al., 2009). Sample items in line with the concept of exploration include "I attend presentations or talks related to a career I might find interesting" and "I volunteer in an area that I find interesting," whereas items in line with the concept of enrichment include "I ask people in social settings about what they do for a living or what they are interested in doing" and "I attend lectures, exhibits, and community events."

The second OES-AA factor contained items that represent cognitive interventions. Sample items include "I imagine how it might feel to do the kind of work I'm considering," "I notice how I feel in different work environments," and "I daydream about career possibilities." Comparable with items found in Factor 1, items included in Factor 2 either strengthened preexisting career interests or increased and explored new career ideas. Whereas items in Factor 1 included behavioral interventions (e.g., I attend, I volunteer, I talk to), items in Factor 2 included cognitive strategies (e.g., I daydream, I notice, I picture).

With regard to the Caucasian American college student sample, an exploratory factor analysis originally resulted in a five-factor structure. After employing item reduction and factor rotation methods, two factors remained accounting for 17% of the variance. Similar to the Asian American sample, the construct of occupational engagement for Caucasian Americans was also comprised of two distinct and related factors.

Examination of the OES-CA factor structure revealed a similar pattern found within the two-factor structure of the OES-AA. Items included in the two factors either solidified and narrowed established career interests or increased opportunities for additional information and ideas. Factor 1 contains items that represent cognitive strategies of occupational engagement, while Factor 2 includes items that represent behavioral and experiential interventions.

Taken as a whole, the construct of occupational engagement demonstrated similar results across two ethnic and culturally unique samples. That is, similar latent themes emerged for both the Asian American and Caucasian American students. Krieshok et al. (2009) proposed that occupational engagement is *behavioral*, a process through which individuals become more career adaptive by participating in a variety of activities (e.g., attending events, volunteering, establishing professional networks). This process increases experiential learning and information obtained through such experiences that in turn assist individuals in effective career decision-making. Findings from the current study build upon Krieshok's theory and posit that the construct of occupational engagement is not limited to *external* behavioral interventions, but may also include *internal* cognitive interventions (e.g., daydreaming, envisioning, emotional awareness). This position is further supported by the current research's findings, where similar latent themes were found across both the Asian American and Caucasian American samples.

Moreover, findings also provide initial evidence to support the cross-cultural validity of the OES scales. Differences observed between the two OES scales for the Asian American and Caucasian American samples lie in the proportion of variance accounted for by each factor and minor deviations in regard to the factor structure and order. As previously noted, two similar themes emerged for both instruments; factors either represented behavioral strategies or cognitive strategies. In the Asian American sample, the majority of variance was explained by the factor that included behavior interventions (Factor 1; 17 items; accounting for 12.53% of the variance). Interestingly, the opposite was observed in the Caucasian American sample. The factor that contained cognitive strategies of occupational engagement explained the majority of variance (Factor 1; nine items, accounting for 8.50% of the variance).

Deviations found between the OES-AA and OES-CA may lie in the cultural distinctions of occupational values and worldviews of work and vocational development. For instance, literature suggests that Asian Americans' occupational values are primarily extrinsic in nature, develop during childhood, persist throughout early adulthood, and play a vital role in future career related decisions. Studies examining the occupational values of Asian Americans suggest extrinsic factors such as security and monetary worth are particularly important values for many Asian Americans (Leong et al., 2007). Research observing the work values of Chinese American children noted that the two most important work values endorsed by 7th and 8th graders were the amount of money earned and task satisfaction (Leong & Tata, 1990). Similarly, in a study comparing the work values of Asian American and Caucasian American college students (Leong, 1991), Asian Americans were found to place greater emphasis on extrinsic and security occupational values (e.g., making money, having a stable and secure future, etc.) relative to Caucasian American college students.

Leong (1993) asserted that “Asian American clients, relative to White clients, may take a more extrinsic and pragmatic view of careers and may not be very interested in viewing careers as an issue of self-concept or self-actualization” (p. 35). That said, when seeking information about the world of work in attempts to make career related decisions, pragmatic and behavioral strategies may be preferred over self-exploration and insight oriented strategies among Asian Americans. These cultural differences observed between Asian Americans and Caucasian Americans may provide clarification as to why the majority of variance for the Asian American sample was explained by behavioral strategies and cognitive strategies.

Hypothesis 2

The second research hypothesis stated that relationship between occupational engagement and grade point average (GPA) would reflect a positive correlation among both Asian American and Caucasian American college students. To test this hypothesis, the researcher performed a bivariate analysis between the two sample’s college GPA with the newly developed OES-AA and OES-CA total and subscale scores. Statistical analysis partially supported this hypothesis.

Examination of the results demonstrated a significant positive correlation between college GPA and the OES-AA total score and OES-AA Factor 1 score; however, no significant relationship was found between college GPA and the OES-AA Factor 2 score. This lends further support that for Asian Americans, behavioral strategies of occupational engagement may be more closely tied with career related achievement and not cognitive strategies, as no relationship was found between Factor 2 and GPA. For the Asian American college students, being occupationally engaged and participating in active behavioral strategies (e.g., attending community events, volunteering, tutoring, etc.) positively correlate with academic performance.

This finding also corroborates the plethora of research literature demonstrating positive associations between extracurricular activities and academic achievement (Eccles, Barber, Stone, & Hunt, 2003).

Results for the Caucasian American sample yielded a significant positive correlation between college GPA and the OES-CA total score and both subscale scores. This observation is consistent with Cox's (2008) finding that occupational engagement significantly predicted college GPA and being "better off." In contrast to results observed in the Asian American sample, being occupationally engaged and participating in both behavioral and cognitive strategies predicted academic achievement.

Hypothesis 3

The third hypothesis posited that the relationship between Asian American occupational engagement and life satisfaction would yield a significant and positive correlation. To test this assumption, bivariate analyses between the subjective life satisfaction, as measured by the Satisfaction With Life Scale (SWLS), and OES-AA total and subscale scores were observed. Results fully supported this hypothesis.

Significant positive correlations were demonstrated between subjective life satisfaction and the OES-AA Factor 1, OES-AA Factor 2, and OES-AA total score. Similar to findings observed in a predominantly Caucasian American college sample (Cox, 2008) and among adolescent students (Hirschi, 2009), for Asian Americans occupational engagement also positively correlated with life satisfaction. Paired with the results observed in Hypothesis 2, occupational engagement appears to be a positive and favorable attribute that coincides with academic success and overall life satisfaction for Asian American college students. Cumulatively, these findings indicate that Asian American college students who participate in

activities that increase occupational engagement are also more career adaptive, better prepared for the unpredictable landscape of work, and report higher satisfaction with life.

Hypothesis 4

The fourth hypothesis proposed that Asian Americans' occupational engagement and Asian values, measured via the Asian Values Scale (AVS), would reflect a significant negative correlation. Review of the literature suggest that Asian Americans value collectivism, prefer a more dependent decision-making style, are less autonomous, and have a low tolerance of ambiguity (Leong, 1991, Leong & Gim-Chung, 1995; Leung, Ivey, & Suzuki, 1994). Given that the construct of occupational engagement calls for individuals to participate in novel behaviors and experiences that foster autonomy, independent decision-making, and ambiguity, the researcher hypothesized that traditional Asian values would negatively correlate with occupational engagement. Examination of bivariate correlations between OES-AA total scale and subscale scores and AVS total and subscale scores did not support this hypothesis.

The AVS yields a total score and six latent factor scores including (1) Conformity to Norms, (2) Family Recognition Through Achievement, (3) Emotional-Self Control, (4) Collectivism, (5) Humility, and (6) Filial Piety. None of the AVS subscale scores or total scale score demonstrated a significant and negative correlation with OES-AA scores. In fact, the opposite was observed. The AVS composite scores and the majority of AVS subscale scores demonstrated positive and significant correlations with OES-AA total scale and subscale scores.

The results indicate that conforming to traditional Asian values does not equate to lower levels of occupational engagement. Juxtaposed to what the literature suggests and to the researcher's hypothesis, adhering to traditional Asian values does not serve as a barrier to participating in occupational engagement activities. These observations provide further credence

for the notion of occupational engagement as being a cross-culturally sensitive and universal construct.

Hypothesis 5

The fifth and final hypothesis asserted that the relationship observed between Asian Americans' occupational engagement and level of acculturation would reflect a positive and significant correlation. To test this hypothesis, the researcher employed a bivariate analysis between participants' acculturation score, measured via the Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA), and OES-AA total and subscale scores. Examination of results did not support this hypothesis.

Results reflected positive relationships between OES-AA and SL-ASIA scores; however, none were statistically significant. These findings indicate that acculturation, the extent to which Asian Americans orient toward or away from Western traditions, does not impact one's ability to be occupationally engaged. Paired with the results observed between Asian American values and occupational engagement, one could possibly argue that adhering to Asian cultural values/traditions is a better predictor of being occupationally engaged than adhering to more Western cultural values/traditions.

Limitations

Limitations to the current study include threats to external validity and construct validity. To obtain an adequate sample size of Asian American college students, the researcher employed an online research company that distributes and collects survey data. Over 450 participants began the study while only 300 completed all of the included measures. Data analyzed for the Caucasian American sample was obtained through an archive data set (Cox, 2008). In Cox's study, all participants were from a large Midwestern public research university and were

solicited in person to participate. It is possible that Asian American and Caucasian American participants who elected to participate and complete the study were predisposed to having higher levels of occupational engagement, college grade point averages, and satisfaction with life than those who decided not to participate. Rosenthal and Rosnow (1975) have noted that individuals who participate in social science research have a propensity to be more altruistic, educated, extroverted, and of a higher social class than those individuals who do not. That said, the sampling procedures utilized in the current study potentially limit the overall generalizability of the findings.

Another limitation to the study includes the method of employed statistical analyses. To test the study's hypotheses regarding the relationship between occupational engagement and its relationship to college GPA, subjective life satisfaction, adherence to Asian values, and level of acculturation, the researcher examined intercorrelations between occupational engagement and the aforementioned variables of interest. Though the majority of these bivariate correlations were statistically significant, observations from the study are speculative and not causal or predictive. In actuality, several confounding variables (e.g., socioeconomic status, motivation, self-concept) may equally "predict" and result in similar findings. Future examinations between occupational engagement and dependent variables of interest should consider utilizing a more robust statistical procedure that accounts for potential confounding variables.

Additionally, for congruency and ease of interpretation, the researcher decided to maintain a factor (OES-CA Factor 2) that demonstrated an internal reliability ($\alpha = .79$) below the recommended standard of .80 (Gall, Gall, & Borg, 2007). However, given the factor's close proximity to .80 and proportion of variance explained, the researcher chose to maintain the factor for a richer interpretation. In such circumstances, Field (2005) advocates that the removal and

retention of factors or items should be based in theory and not solely on statistics. That said, an additional limitation of the study involved the exchange of statistical validity for a more fruitful theoretical interpretation.

Implications and Future Research Recommendations

The primary goal of the present study was to explore how the construct of occupational engagement manifests in an ethnic minority sample. More specifically, the researcher aimed to identify what sets of behaviors define occupational engagement for Asian American college students and examine how the construct varies from a predominantly Caucasian American college student sample. To do so, the researcher performed a method of statistical analysis that identifies underlying themes in participants' responses to a preexisting pool of items measuring occupational engagement, the OES-CS. Examination of these results revealed two psychometrically sound factors across both samples. Though the current study was exploratory in nature, the resulting findings may have significant implications for Krieshok's Trilateral Model of Adaptive Career Decision-Making (Krieshok, 2001; Krieshok et al., 2009) and for the field of vocational psychology.

With regard to Krieshok's model and for the construct of occupational engagement, the researcher posits that the construct may be comprised of two separate and related factors: 1) Behavioral Enrichment and Exploration, and 2) Cognitive Enrichment and Exploration. This position is supported by the research's findings, where similar latent themes were identified for both the Asian American and Caucasian American samples. Interestingly, more than half of the items retained in the newly developed OES-CA were also included in the OES-AA. These common factors and items identified across both samples provide preliminary evidence of a universal, culturally competent measure of occupational engagement. Future research targeting

other ethnic minority samples (e.g., African Americans, Latino/Mexican Americans) is recommended utilizing the same statistical procedures outlined in the current study. Such studies would build on the cross-cultural relevance and universality of occupational engagement.

The current findings also have implications for career counselors serving Asian American college students. Research literature suggests Asian Americans prefer structured, directive, and solution oriented approaches when seeking mental health services (Kim & Omizo, 2003). In an article reviewing methods of being more effective with Asian American clients, Berg and Jaya (1993) stressed pragmatic solutions and cautioned against interventions that were insight or growth oriented. Coupled with the results demonstrated from the current study, Asian American college students seeking career guidance may benefit more from direct and experiential interventions (e.g., job shadowing, informational interviewing, attending job fairs) than from self-exploratory and insight oriented career counseling.

Given that occupational engagement has been shown to positively correlate with favorable characteristics such as academic success and well-being, these interventions may also be suitable for students of all ages. To assess this assumption and to strengthen the measure in terms of reliability and validity, replication of the construct's two-factor structure is recommended with students in primary and secondary school and of varying cultural backgrounds. Lastly, test-retest reliability should be established to assess the consistency of the construct over time.

In conclusion, the current research study sought to address the gap in the occupational engagement research literature regarding cultural differences in ethnic minorities. Findings yielded a psychometrically sound two-factor structure common in both an Asian American and Caucasian American college sample. The two factors, dubbed Behavioral Exploration and

Enrichment and Cognitive Exploration and Enrichment, include strategies that either narrow and strengthen preexisting career interests or increase opportunities to expand knowledge and information about one's relation to the world of work. The construct was also found to positively correlate with desirable characteristics including life satisfaction and academic achievement. In sum, results from the current study provide initial evidence of a cross-culturally valid instrument of occupational engagement that has pertinent implications for Krieshok's Trilateral Model of Adaptive Career Decision-Making and for the field of vocational psychology.

APPENDIX A

Participant Demographic Questionnaire

Please provide the following demographic information:

Age: ___ Sex: ___ Male
 ___ Female
 ___ Other

Year in School: ___ Freshman ___ Sophomore ___ Junior ___ Senior ___ Graduate Student

What is your college major? _____ ___ Undecided

Are you a first generation college student? ___ Yes ___ No

Are you an international college student? ___ Yes ___ No

What is your current college GPA? _____

How do you identify? Please mark all that apply:

___ American Indian or Native American	___ Mexican or Mexican American
___ Asian, Asian American, or Pacific Highlander	___ Multiracial
___ Black or African American	___ Other
___ Hispanic or Latino	___ White (non -Hispanic)

APPENDIX B

Occupational Engagement Scale – College Student (57-item Version)

How Well Does Each Statement Describe You?

Please **CIRCLE** the answer that best describes you.

1	2	3	4	5
Not at all Like Me		Somewhat Like Me		Very much Like Me

1. 1 2 3 4 5 I have a list of careers I might consider.
2. 1 2 3 4 5 I'm at a stage in life where I don't need to think much about my career path.
3. 1 2 3 4 5 I daydream about career possibilities.
4. 1 2 3 4 5 I read about careers I find interesting.
5. 1 2 3 4 5 I talk about my career choices with family or friends.
6. 1 2 3 4 5 I am actively involved in groups or organizations.
7. 1 2 3 4 5 I keep an eye on trends and events that might impact potential occupations.
8. 1 2 3 4 5 I keep an open mind about jobs I might apply for right out of school.
9. 1 2 3 4 5 I am aware of the educational requirements for a career that I find interesting.
10. 1 2 3 4 5 I take classes that are not required, just because they seem interesting.
11. 1 2 3 4 5 I am comfortable with the possibility that factors I cannot predict may affect my future.
12. 1 2 3 4 5 I make connections with people who might be helpful to me later.
13. 1 2 3 4 5 I have contact with people working in fields I find interesting.
14. 1 2 3 4 5 I have created a list of working conditions that appeal to me.
15. 1 2 3 4 5 I seldom discuss my career plans with a teacher, advisor, or counselor.
16. 1 2 3 4 5 I am fixed on my career path.
17. 1 2 3 4 5 I look for ways my strengths might apply to different kinds of work.
18. 1 2 3 4 5 I haven't given much thought to my future experiences at work.
19. 1 2 3 4 5 I gain hands on experience that I might use in the future.
20. 1 2 3 4 5 I don't have much volunteer experience.
21. 1 2 3 4 5 I imagine how it might feel to do the kind of work I'm considering.

22. 1 2 3 4 5 I notice how I feel in different work environments.
23. 1 2 3 4 5 I picture how my life might branch out in unplanned directions.
24. 1 2 3 4 5 I volunteer in an area that I find interesting.
25. 1 2 3 4 5 I think it's foolish to trust my gut when making career decisions.
26. 1 2 3 4 5 I just know when I encounter a situation worth pursuing.
27. 1 2 3 4 5 I attend lectures, exhibits, and community events.
28. 1 2 3 4 5 I don't let my emotions influence my career plans.
29. 1 2 3 4 5 I learn little from trying new things.
30. 1 2 3 4 5 I discuss my strengths and weaknesses with a teacher or mentor.
31. 1 2 3 4 5 I keep my resume up to date.
32. 1 2 3 4 5 I think my career plan is fool proof.
33. 1 2 3 4 5 I ask myself how well a particular career fits with who I am.
34. 1 2 3 4 5 I picture myself actually doing the kind of work I'm considering.
35. 1 2 3 4 5 I don't need a back-up plan for my career.
36. 1 2 3 4 5 I attend presentations or talks related to a career I might find interesting.
37. 1 2 3 4 5 I have not talked with people working in my field of interest.
38. 1 2 3 4 5 I don't often discuss ideas from readings or classes with others outside of class (students, family members, coworkers, etc.).
39. 1 2 3 4 5 I can succeed in my field without talking to people who work in it.
40. 1 2 3 4 5 I tutor or teach other students.
41. 1 2 3 4 5 I hang out with people who are different from me.
42. 1 2 3 4 5 I take part in a variety of activities to see where my interests lie.
43. 1 2 3 4 5 I work(ed) part-time or as an intern.
44. 1 2 3 4 5 I ask people in social settings about what they do for a living or what they are interested in doing.
45. 1 2 3 4 5 I visit places I'm interested in working at so I can learn more about them.
46. 1 2 3 4 5 I have no interest in studying abroad.
47. 1 2 3 4 5 I avoid speaking up in class.
48. 1 2 3 4 5 I can succeed by sticking to what I know.

49. 1 2 3 4 5 I pursue opportunities in life because I just know they will come in handy.
50. 1 2 3 4 5 I avoid talking to teachers outside of class.
51. 1 2 3 4 5 I trust that a career I have in mind is right for me, even if I can't explain why.
52. 1 2 3 4 5 I picture the kind of life I might have with a particular career.
53. 1 2 3 4 5 I try to dress or look the part of the career I have in mind.
54. 1 2 3 4 5 I imagine what my future workplace might look like.
55. 1 2 3 4 5 I work with teachers or staff on activities other than coursework (committees, orientation, student life activities, etc.).
56. 1 2 3 4 5 I do lots of things that are interesting to me.
57. 1 2 3 4 5 I have meaningful conversations with students of a different ethnicity.

APPENDIX C

The Satisfaction with Life Scale

Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

7 - Strongly agree

6 - Agree

5 - Slightly agree

4 - Neither agree nor disagree

3 - Slightly disagree

2 - Disagree

1 - Strongly disagree

_____ In most ways my life is close to my ideal.

_____ The conditions of my life are excellent.

_____ I am satisfied with my life.

_____ So far I have gotten the important things I want in life

_____ If I could live my life over, I would change almost nothing.

APPENDIX D

The Asian Values Scale (24-Item)

Factor 1: Conformity to Norms

- One should not deviate from familial and social norms.
- Following familial and social expectations is important.
- One need not follow one's family's and the society's norms.
- One need not conform to one's family's and the society's expectations.
- The worst thing one can do is bring disgrace to one's family reputation.
- When one receives a gift, one should reciprocate with a gift of equal or greater value.
- One need not follow the role expectations (gender, family hierarchy) of one's family.
- Family's reputation is not the primary social concern.

Factor 2: Family Recognition Through Achievement

- Occupational failure does not bring shame to the family.
- Educational failure does not bring shame to the family.
- One need not achieve academically to make one's parents proud.

Factor 3: Emotional Self-Control

- The ability to control one's emotions is a sign of strength.
- Parental love should be implicitly understood and not openly expressed.
- One should have sufficient inner resources to resolve emotional problems.

Factor 4: Collectivism

- One should think about one's group before oneself.
- One should consider the needs of others before considering one's own needs.
- One's achievements should be viewed as family's achievements.

Factor 5: Humility

- Modesty is an important quality for a person.
- One should not be boastful.
- One should be humble and modest.

Factor 6: Filial Piety

- One's family need not be the main source of trust and dependence.
 - Children need not take care of their parents when the parents become unable to take care of themselves.
 - Children should not place their parents in retirement homes.
 - Elders may not have more wisdom than younger persons.
-

APPENDIX E

Suinn-Lew Asian Self-Identity Acculturation Scale

INSTRUCTIONS: The questions which follow are for the purpose of collecting information about your historical background as well as more recent behaviors which may be related to your cultural identity. Choose the one answer which best describes you.

1. What language can you speak?
 1. Asian only (for example, Chinese, Japanese, Korean, Vietnamese, etc.)
 2. Mostly Asian, some English
 3. Asian and English about equally well (bilingual)
 4. Mostly English, some Asian
 5. Only English

2. What language do you prefer?
 1. Asian only (for example, Chinese, Japanese, Korean, Vietnamese, etc.)
 2. Mostly Asian, some English
 3. Asian and English about equally well (bilingual)
 4. Mostly English, some Asian
 5. Only English

3. How do you identify yourself?
 1. Oriental
 2. Asian
 3. Asian-American
 4. Chinese-American, Japanese-American, Korean-American, etc.
 5. American

4. Which identification does (did) your mother use?
 1. Oriental
 2. Asian
 3. Asian-American
 4. Chinese-American, Japanese-American, Korean-American, etc.
 5. American

5. Which identification does (did) your father use?
 1. Oriental
 2. Asian
 3. Asian-American
 4. Chinese-American, Japanese-American, Korean-American, etc.
 5. American

6. What was the ethnic origin of the friends and peers you had, as a child up to age 6?
 1. Almost exclusively Asians, Asian-Americans, Orientals
 2. Mostly Asians, Asian-Americans, Orientals
 3. About equally Asian groups and Anglo groups

4. Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
 5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
7. What was the ethnic origin of the friends and peers you had, as a child from 6 to 18?
1. Almost exclusively Asians, Asian-Americans, Orientals
 2. Mostly Asians, Asian-Americans, Orientals
 3. About equally Asian groups and Anglo groups
 4. Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
 5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
8. Whom do you now associate with in the community?
1. Almost exclusively Asians, Asian-Americans, Orientals
 2. Mostly Asians, Asian-Americans, Orientals
 3. About equally Asian groups and Anglo groups
 4. Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
 5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
9. If you could pick, whom would you prefer to associate with in the community?
1. Almost exclusively Asians, Asian-Americans, Orientals
 2. Mostly Asians, Asian-Americans, Orientals
 3. About equally Asian groups and Anglo groups
 4. Mostly Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
 5. Almost exclusively Anglos, Blacks, Hispanics, or other non-Asian ethnic groups
10. What is your music preference?
1. Only Asian music (for example, Chinese, Japanese, Korean, Vietnamese, etc.)
 2. Mostly Asian
 3. Equally Asian and English
 4. Mostly English
 5. English only
11. What is your movie preference?
1. Asian-language movies only
 2. Asian-language movies mostly
 3. Equally Asian/English English-language movies
 4. Mostly English-language movies only
 5. English-language movies only
12. What generation are you? (circle the generation that best applies to you:)
1. 1st Generation = I was born in Asia or country other than U.S.
 2. 2nd Generation = I was born in U.S., either parent was born in Asia or country other than U.S.
 3. 3rd Generation = I was born in U.S., both parents were born in U.S, and all grandparents born in Asia or country other than U.S.

4. 4th Generation = I was born in U.S., both parents were born in U.S, and at least one grandparent born in Asia or country other than U.S. and one grandparent born in U.S.
5. 5th Generation = I was born in U.S., both parents were born in U.S., and all grandparents also born in U.S.

13. Where were you raised?

1. In Asia only
2. Mostly in Asia, some in U.S.
3. Equally in Asia and U.S.
4. Mostly in U.S., some in Asia
5. In U.S. only

14. What contact have you had with Asia?

1. Raised one year or more in Asia
2. Lived for less than one year in Asia
3. Occasional visits to Asia
4. Occasional communications (letters, phone calls, etc.) with people in Asia
5. No exposure or communications with people in Asia

15. What is your food preference at home?

1. Exclusively Asian food
2. Mostly Asian food, some American
3. About equally Asian and American
4. Mostly American food
5. Exclusively American food

16. What is your food preference in restaurants?

1. Exclusively Asian food
2. Mostly Asian food, some American
3. About equally Asian and American
4. Mostly American food
5. Exclusively American food

17. Do you

1. Read only an Asian language?
2. Read an Asian language better than English?
3. Read both Asian and English equally well?
4. Read English better than an Asian language?
5. Read only English?

18. Do you

1. Write only an Asian language?
2. Write an Asian language better than English?
3. Write both Asian and English equally well?
4. Write English better than an Asian language?

5. Write only English?

19. If you consider yourself a member of the Asian group (Oriental, Asian, Asian-American, Chinese-American, etc., whatever term you prefer), how much pride do you have in this group?

1. Extremely proud
2. Moderately proud
3. Little pride
4. No pride but do not feel negative toward group
5. No pride but do feel negative toward group

20. How would you rate yourself?

1. Very Asian
2. Mostly Asian
3. Bicultural
4. Mostly Westernized
5. Very Westernized

21. Do you participate in Asian occasions, holidays, traditions, etc.?

1. Nearly all
2. Most of them
3. Some of them
4. A few of them
5. None at all

APPENDIX F

Human Subjects Approval

9/9/11
HSCL #19501
Thai Le
1401 Lawrence Ave., Apt. 6
Lawrence, KS 66049

The Human Subjects Committee, Lawrence Campus (HSCL) has received your response to its expedited review of your research project

19501 Le/Krieshok (PRE) Occupational Engagement in Asian-American College Students

and approved this project under the expedited procedure provided in 45 CFR 46.110 (f) (7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Since your research presents no risk to participants and involves no procedures for which written consent is normally required outside of the research context HSCL may waive the requirement for a signed consent form (45 CFR 46.117 (c) (2)). Your information statement meets HSCL requirements. The Office for Human Research Protections requires that your information statement must include the note of HSCL approval and expiration date, which has been entered on the form sent back to you with this approval.

1. At designated intervals until the project is completed, a Project Status Report must be returned to the HSCL office.
2. Any significant change in the experimental procedure as described should be reviewed by this Committee prior to altering the project.
3. Notify HSCL about any new investigators not named in original application. Note that new investigators must take the online tutorial at http://www.rcr.ku.edu/hsc1/hsp_tutorial/000.shtml.
4. Any injury to a subject because of the research procedure must be reported to the Committee immediately.
5. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity. If you use a signed consent form, provide a copy of the consent form to subjects at the time of consent.
6. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.

Please inform HSCL when this project is terminated. You must also provide HSCL with an annual status report to maintain HSCL approval. Unless renewed, approval lapses one year after approval date. If your project receives funding which requests an annual update approval, you

must request this from HSCL one month prior to the annual update. Thanks for your cooperation. If you have any questions, please contact me.

Sincerely,

Jan Butin
Associate Coordinator
Human Subjects Committee Lawrence
cc: Thomas Krieshok

APPENDIX G

Consent for Participation in a Research Study

The Department of Psychology and Research in Education at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to better understand the decision-making processes surrounding employment. This will entail your completion of a questionnaire. The questionnaire packet is expected to take approximately 30 minutes to complete. The content of the questionnaires should cause no more discomfort than you would experience in your everyday life. Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of how individuals make choices about their future work/careers. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response. Completion of the survey indicates your willingness to participate in this project and that you are over the age of eighteen.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429 or (785) 864-7385 or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email janbutin@ku.edu.

Sincerely,

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Approved by the Human Subjects Committee University of Kansas, Lawrence Campus (HSCL). Approval expires one year from 9/9/2011. HSCL #19150

APPENDIX H

Occupational Engagement Scale – Asian American (28-item Version)

How Well Does Each Statement Describe You?

Please **CIRCLE** the answer that best describes you.

1	2	3	4	5
Not at all Like Me		Somewhat Like Me		Very much Like Me

1. 1 2 3 4 5 I attend presentations or talks related to a career I might find interesting.
2. 1 2 3 4 5 I have contact with people working in fields I find interesting.
3. 1 2 3 4 5 I attend lectures, exhibits, and community events.
4. 1 2 3 4 5 I visit places I'm interested in working at so I can learn more about them.
5. 1 2 3 4 5 I am actively involved in groups or organizations.
6. 1 2 3 4 5 I work with teachers or staff on activities other than coursework (committees, orientation, student life activities, etc.).
7. 1 2 3 4 5 I take part in a variety of activities to see where my interests lie.
8. 1 2 3 4 5 I discuss my strengths and weaknesses with a teacher or mentor.
9. 1 2 3 4 5 I make connections with people who might be helpful to me later.
10. 1 2 3 4 5 I ask people in social settings about what they do for a living or what they are interested in doing.
11. 1 2 3 4 5 I volunteer in an area that I find interesting.
12. 1 2 3 4 5 I keep an eye on trends and events that might impact potential occupations.
13. 1 2 3 4 5 I tutor or teach other students.
14. 1 2 3 4 5 I gain hands on experience that I might use in the future.
15. 1 2 3 4 5 I keep my resume up to date.
16. 1 2 3 4 5 I have meaningful conversations with students of a different ethnicity.
17. 1 2 3 4 5 I talk about my career choices with family or friends
18. 1 2 3 4 5 I imagine how it might feel to do the kind of work I'm considering.
19. 1 2 3 4 5 I picture the kind of life I might have with a particular career.
20. 1 2 3 4 5 I notice how I feel in different work environments.

21. 1 2 3 4 5 I picture myself actually doing the kind of work I'm considering.
22. 1 2 3 4 5 I ask myself how well a particular career fits with who I am.
23. 1 2 3 4 5 I look for ways my strengths might apply to different kinds of work.
24. 1 2 3 4 5 I am aware of the educational requirements for a career that I find interesting.
25. 1 2 3 4 5 I picture how my life might branch out in unplanned directions.
26. 1 2 3 4 5 I just know when I encounter a situation worth pursuing.
27. 1 2 3 4 5 I keep an open mind about jobs I might apply for right out of school.
28. 1 2 3 4 5 I daydream about career possibilities.

APPENDIX I

Occupational Engagement Scale – Caucasian American (20-item Version)

How Well Does Each Statement Describe You?

Please **CIRCLE** the answer that best describes you.

1	2	3	4	5
Not at all Like Me		Somewhat Like Me		Very much Like Me

1. 1 2 3 4 5 I picture myself actually doing the kind of work I'm considering.
2. 1 2 3 4 5 I imagine how it might feel to do the kind of work I'm considering.
3. 1 2 3 4 5 I picture that kind of life I might have with a particular career.
4. 1 2 3 4 5 I ask myself how well a particular career fits with who I am.
5. 1 2 3 4 5 I imagine what my future workplace might look like.
6. 1 2 3 4 5 I notice how I feel in different work environments.
7. 1 2 3 4 5 I am aware of the educational requirements for a career that I find interesting.
8. 1 2 3 4 5 I talk about my career choices with family or friends.
9. 1 2 3 4 5 I haven't given much thought to my future experiences at work.
10. 1 2 3 4 5 I have contact with people working in fields I find interesting.
11. 1 2 3 4 5 I have not talked with people working in my field of interest.
12. 1 2 3 4 5 I don't have much volunteer experience.
13. 1 2 3 4 5 I avoid talking to teachers outside of class.
14. 1 2 3 4 5 I volunteer in an area that I find interesting.
15. 1 2 3 4 5 I seldom discuss my career plans with a teacher, advisor, or counselor.
16. 1 2 3 4 5 I gain hands on experience that I might use in the future.
17. 1 2 3 4 5 I don't often discuss ideas from readings or classes with others outside of class (students, family members, coworkers, etc.).
18. 1 2 3 4 5 I am actively involved in groups or organizations.
19. 1 2 3 4 5 I can succeed in my field without talking to people who work in it.
20. 1 2 3 4 5 I tutor or teach other students.

APPENDIX J

Cross Examination of OES-CA items with OES-AA and OES-CA

OES-CA items	OES- AA Factor 1	OES- AA Factor2	OES- CA Factor 1	OES- CA Factor 2
1. I have a list of careers I might consider.	X	X	X	X
2. I'm at a stage in life where I don't need to think much about my career path.	X	X	X	X
3. I daydream about career possibilities.	X	.423	X	X
4. I read about careers I find interesting.	X	X	X	X
5. I talk about my career choices with family or friends.	.420	X	.452	X
6. I am actively involved in groups or organizations.	.594	X	X	.437
7. I keep an eye on trends and events that might impact potential occupations.	.497	X	X	X
8. I keep an open mind about jobs I might apply for right out of school.	X	.423	X	X
9. I am aware of the educational requirements for a career that I find interesting.	X	.522	.452	X
10. I take classes that are not required, just because they seem interesting.	X	X	X	X
11. I am comfortable with the possibility that factors I cannot predict may affect my future.	X	X	X	X
12. I make connections with people who might be helpful to me later.	.524	X	X	X
13. I have contact with people working in fields I find interesting.	.604	X	X	.548
14. I have created a list of working conditions that appeal to me.	X	X	X	X

15. I seldom discuss my career plans with a teacher, advisor, or counselor.	X	X	X	.478
16. I am fixed on my career path.	X	X	X	X
17. I look for ways my strengths might apply to different kinds of work.	X	.535	X	X
18. I haven't given much thought to my future experiences at work.	X	X	.409	X
19. I gain hands on experience that I might use in the future.	.470	X	X	.458
20. I don't have much volunteer experience.	X	X	X	.511
21. I imagine how it might feel to do the kind of work I'm considering.	X	.678	.653	X
22. I notice how I feel in different work environments.	X	.584	.486	X
23. I picture how my life might branch out in unplanned directions.	X	.479	X	X
24. I volunteer in an area that I find interesting.	.503	X	X	.498
25. I think it's foolish to trust my gut when making career decisions.	X	X	X	X
26. I just know when I encounter a situation worth pursuing.	X	.455	X	X
27. I attend lectures, exhibits, and community events.	.601	X	X	X
28. I don't let my emotions influence my career plans.	X	X	X	X
29. I learn little from trying new things.	X	X	X	X
30. I discuss my strengths and weaknesses with a teacher or mentor.	.542	X	X	X
31. I keep my resume up to date.	.454	X	X	X
32. I think my career plan is fool proof.	X	X	X	X

33. I ask myself how well a particular career fits with who I am.	X	.538	.600	X
34. I picture myself actually doing the kind of work I'm considering.	X	.573	.752	X
35. I don't need a back-up plan for my career.	X	X	X	X
36. I attend presentations or talks related to a career I might find interesting.	.638	X	X	X
37. I have not talked with people working in my field of interest.	X	X	X	.530
38. I don't often discuss ideas from readings or classes with others outside of class (students, family members, coworkers, etc.).	X	X	X	.442
39. I can succeed in my field without talking to people who work in it.	X	X	X	.437
40. I tutor or teach other students.	.488	X	X	.432
41. I hang out with people who are different from me.	X	X	X	X
42. I take part in a variety of activities to see where my interests lie.	.550	X	X	X
43. I work(ed) part-time or as an intern.	X	X	X	X
44. I ask people in social settings about what they do for a living or what they are interested in doing.	.517	X	X	X
45. I visit places I'm interested in working at so I can learn more about them.	.599	X	X	X
46. I have no interest in studying abroad.	X	X	X	X
47. I avoid speaking up in class.	X	X	X	X
48. I can succeed by sticking to what I know.	X	X	X	X
49. I pursue opportunities in life because I just know they will come in handy.	X	X	X	X

50. I avoid talking to teachers outside of class.	X	X	X	.504
51. I trust that a career I have in mind is right for me, even if I can't explain why.	X	X	X	X
52. I picture the kind of life I might have with a particular career.	X	.594	.654	X
53. I try to dress or look the part of the career I have in mind.	X	X	X	X
54. I imagine what my future workplace might look like.	X	X	.543	X
55. I work with teachers or staff on activities other than coursework (committees, orientation, student life activities, etc.).	.590	X	X	X
56. I do lots of things that are interesting to me.	X	X	X	X
57. I have meaningful conversations with students of a different ethnicity.	.439	X	X	X

Notes. OES-AA = Occupational Engagement Scale-Asian American. OES-CA = Occupational Engagement Scale-Caucasian American. GPA = Grade Point Average. X = item did not load

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