

ACADEMIC EXPECTATIONS STRESS IN ASIAN AMERICAN
UNDERGRADUATE STUDENTS – A REVALIDATION STUDY

A Dissertation

by

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ABSTRACT

Asian American college students experience academic stress and expectations from selves and from their parents to achieve academic success. The internalized and externalized expectations are experienced by Asian American college students so much so that there may be an unstated academic competition among themselves and their Asian American peers. The initial study aimed to understand perceived academic expectations using social comparison theory as well as the drive to compete by parental pressure. Two focus groups were conducted and eight themes emerged after analysis of the data was complete. The themes suggest that Asian American college students perceive more academic competition with their Asian American peers in high school as compared to college. Additionally, the students noted that parental sacrifices, feelings of obligations to repay their parents, and financial stability are motivators to achieve academic successes in college and beyond. Perhaps the most important theme that emerged was the internalization of parental expectations, which also serves as a compass for achieving academic success. The second study explored the sources of academic expectations stress that Asian American college students experience by revalidating the Academic Expectations Stress Inventory (AESI) originally developed by Ang and Huan. Results suggested that the two factor structure model of the AESI had good model fit with the Asian American undergraduates sample in this study with the following fit indices: RMSEA=.085; CFI=.95; SRMR=.05. These fit indices were within acceptable range for a good model fit. Univariate results indicated that female Asian American

college students experience higher levels of academic expectations stress from themselves. There were no statistically significant differences between U.S. born and non-U.S. Asian American college students in the levels of academic expectations stress perceived in both others (parents/teachers) and self.

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CHAPTER I

INTRODUCTION

Asian American college students are often perceived through the *model minority* lens with specific academic expectations that follow this label (Lee, Wong, & Alvarez, 2009; Yee, Su, Kim, & Yancura, 2009). With these academic expectations stress and the saliency of Asian American peers, the concept of academic competition was explored using the theory of *social comparison* proposed by Leon Festinger in 1954 (Blanton, 2011; Suls & Wheeler, 2000). Using the theory of *social comparison* as a basis for the definition of perceived academic competition, a qualitative study with two focus groups (Manuscript One) attempted to explore and understand perceived academic competition. Since there is not a wide research literature devoted to academic competition among Asian American college students and their Asian American college peers, the first manuscript of this dissertation focusing on exploring and understanding perceived academic competition would fill this gap. This dissertation is presented in two manuscripts. The first manuscript will focus on the exploration and understanding of perceived academic competition among Asian American college students and their Asian American college peers. Two focus groups, under the interpretive paradigm, were utilized to explore how Asian American undergraduate students perceive their academic performance in comparison to other Asian American undergraduate students in their peer group. Additionally, the study sought to understand the academic pressure that Asian American undergraduate students experience due to the perceived academic competition with other Asian American peers. Lastly, the study attempted to explore and understand

how the pressure to succeed academically affects the overall well-being, self-esteem, and mental health of Asian American undergraduate students. The results from the focus groups suggest the presence of perceived academic competition among Asian American undergraduate students and their Asian American undergraduate peers. Additionally, the results from the focus groups echoed the breadth of literature on academic expectations that Asian American college students experience, with the identification of Asian cultural background as a large contributing factor the expectation to succeed. The focus groups also identified sources of academic expectations that Asian American undergraduate students experience.

Following the qualitative study with the two focus groups, which identified sources of academic expectations, the second study, presented in the second manuscript, attempted to measure the sources of expectations in a quantitative manner. Since there are currently no specific instruments that identify and measure sources of academic expectations that Asian American undergraduate students experience, the second study attempted to fill this gap by the revalidation of the Academic Expectations Stress Inventory (AESI) developed by Ang and Huan (2006) for its utility with Asian American college students. The AESI was originally validated with middle and high school students in Singapore and has not been validated with Asian American college students. Additionally, the second study (Manuscript Two) of this dissertation also attempted to answer the following questions: (1) Does the original two factor model of the AESI proposed by Ang and Huan (2006) have good model fit with Asian American undergraduate students? Hypothesis: The two model factor of the AESI proposed by

Ang and Huan will have good model fit with Asian American undergraduate students.

(2) Is there a gender difference in the levels of academic expectations stress experienced from others (parents/teachers) and from self? Hypothesis: Female Asian American undergraduate students will experience higher levels of academic expectations stress from others (parents/teachers) and from self as compared to male Asian American undergraduate students. (3) Is there a difference between U.S. born and non U.S. born Asian American undergraduate students in the levels of academic expectations stress experienced from others (parents/teachers) and from self? Hypothesis: Non-U.S. born Asian American undergraduate students will experience higher levels of academic expectations stress from others (parents/teachers) and from self as compared to U.S. born Asian American undergraduate students. Recommendations and implications for future research and clinical practice are suggested based on the results of the second study.

CHAPTER II

MANUSCRIPT I: ASIAN AMERICAN UNDERGRADUATE STUDENTS AND PERCEIVED ACADEMIC COMPETITION

Introduction

Since 1991 to 2011, there has been an increase in the number of full time Asian American college students in the United States (Data-Planet, 2013). Although the total number of Asian American students in the United States is less than Hispanic, White Non-Hispanic, and Black Non-Hispanic college students, their academic performance, nonetheless, have put them in the spotlight (Data-Planet, 2013). They are viewed as a high achieving minority group that has found success in higher education. In addition, they are viewed as the *model minority*, and a common perception is that due to their academic successes, they do not face major barriers in their education attainment (Hune & Park, 2010). However, this perception can be misleading and leads to Asian American students being left behind when it comes to changes to public policies that could greatly affect them (Hune & Park, 2010). More importantly, being grouped under the umbrella of “Asian American” suggests no differences between different groups of Asian Americans. As a result, the vast differences between different groups of Asian Americans are ignored and their difficulties, barriers, and struggles are discounted because of the public perception that they are successful, intelligent, and do not need assistance.

For Asian American college students, being grouped under the umbrella term of “Asian American” also brings along with it added stress and pressure to succeed and live

up to the expectations that society and their families have of them. For many Asian American students, the expectations are high and constantly made salient to them by their families. As a result, Asian American students may feel the continuous stress of academic attainment and forgo their true interests and pursue majors and careers that are expected of them (Yee, Su, Kim, & Yancura, 2009). Additionally, Asian American peers can be constant reminders of what they are striving for regarding academic performance. Their peers' academic performance, in a way, sets the bar for their own academic performance and thus, perceived academic competition would develop among Asian American peers. This competition is fueled by parents gloating about their children's successes and highlighting those achievements to other Asian American parents, who in turn pressure their children to match those successes (Dundes, Cho, & Kwak, 2009). The awareness of Asian American peers' academic performance and placement in class can also be seen as academic competition. The purpose of this study is to explore the concept of perceived academic competition among Asian American college students, the academic pressure that Asian American undergraduate students experience due to perceived academic competition, and how the pressure to succeed academically affect overall well-being, self-esteem, and mental health.

Social Comparison

The discussion of academic competition is best started with the idea of social comparison. *Social comparison* was coined by Leon Festinger in 1954 to describe his theory on human relations (Suls & Wheeler, 2000). In a review of the literature, Blanton (2001) refers to social comparison as any situation where a person's self-evaluation is

affected by available information of a real or imaged presence of another person. The two types of comparisons are *upward* and *downward social comparison*. In *upward social comparison*, the person doing the comparison, termed the *perceiver*, is comparing himself or herself to a superior person, someone perceived as being better. In *downward social comparison*, the individual compares himself or herself to someone who is perceived to be inferior (Blanton, 2001). The individual providing the accessible information for the comparison by the *perceiver* is termed the *comparison other* or sometimes the *exemplar* (Blanton, 2001).

Thornton and Arrowood (1966) proposed two motivations that operate in social comparison: self-evaluation and self-enhancement. Since self-evaluation involves comparing the self to another person, a *standard* for comparison is needed. Schwarz and Bless (1992) *inclusion-exclusion model* can be utilized to understand how individuals use this *standard* to self-evaluate. The tenant assumption in the inclusion-exclusion model is that any evaluation requires two mental state of representation. The first is of the representation of the *target stimulus*, which is the object being evaluated. The second is the representation of the *standard*, which is the location of the *target stimulus* on the dimension for which it is being evaluated. This location of the *target stimulus* on the dimension being evaluated allows the *perceiver* to make the comparison (Blanton, 2001).

In the case of Asian American college students, the *target stimuli* could be their Asian American peers and the *standards* are academic success indicators. These success indicators can consist of obtaining the highest possible grade point average, getting into

the best possible graduate program or graduate school, and/or training in one of the “acceptable” professions such as medicine, engineering, science, or business (Naumann, Guillaume, & Funder, 2012; Yee et al., 2009). For Asian American college students, their Asian American peers can also serve as *target stimuli* for comparison, be it *downward social comparison* or *upward social comparison*. It would be appropriate to use social comparison to understand the dynamic of perceived academic competition among Asian American college students based on the self-evaluation component of social comparison. Perceiving more or less of their Asian American peers’ academic success as compared to their own can be a source of motivator and/or a source of stress for Asian American college students. Asian American college students may want to be as close to their peers as possible on the mentioned success variables dimension.

Asian American college students and their peers may be competing for the limited available slots in medical, law, and other programs. The knowledge that there are limited available slots for the best professional and graduate programs might act as an impetus for ongoing social comparison in a group of Asian American peers. Asian Americans’ unique status as the *model minority* could also affect not only the social comparison within their Asian American peer group but also with Asian Americans student body as a whole with other ethnic groups on campus. There might be a collective need as an Asian American group, albeit unstated, to uphold the *model minority* label since that is what is expected from the majority society.

The Model Minority

The term *model minority* suggests that Asian Americans have risen from an underprivileged stance to greater heights through their successes. This term also puts Asian Americans in the spotlight as model minorities for other racial minorities to emulate. Asian American students are often seen as valedictorians, music prodigies, and winners of math and science competitions (Lee, Wong, & Alvarez, 2009). In addition, Asian Americans are viewed as diligent and have a tendency to stay out of trouble, which enable them to achieve high academic success (Lee et al., 2009). School counselors, teachers, and peers often perceive Asian American students with these stereotypes and have certain expectations of their academic performance (Lee et al., 2009). This is one negative aspect of what would seem like a flattering label, the *model minority*. Asian American students experience pressure from their parents to succeed in their studies as well as pressure from teachers to make certain grades to live up to the unspoken standards of what it means to be a *model minority* student (Gupta, Szymanski, & Leong, 2011; Lee et al., 2009; Yoo, Burrola, & Steger, 2010). This may entail making A's in all their classes, and being gifted in math, science, and/or music. Once Asian American students start feeling the pressure to perform, they experience a relentless cycle of pressure and stress (Gupta, et al., 2011). According to Lee et al. (2009), Asian American students, regardless of achievement levels, often internalize these racial stereotypes and thus feel pressure to uphold these expectations. Those who fail to meet these *model minority* standards then become depressed and do not ask for assistance due to embarrassment. The source of the embarrassment comes from the

belief that they should be more successful in the subjects they are struggling with (Lee et al., 2009).

Familial Pressure Faced by Asian American Students

One of the most important driving components of student academic success is their family. However, despite being a strong motivator, the family also present as a great stressor for Asian American students, especially when they perceive that they have not lived up to their family's expectations (Zhang, Haddad, Torres, & Chen, 2011; Qin, 2008; Oishi & Sullivan, 2005). Given the important role of family in Asian American students' academic experiences, the following sections will focus on parental expectations in Asian culture and tradition.

Asian American parents value school success; therefore, they emphasize academic success as a positive reflection of the family (Yee et al., 2009). Not only are Asian American students burdened to live up to the *model minority* standards, they are also burdened to live up to their families' expectations (Oishi & Sullivan, 2005). Naumann, Guillaume and Funder (2012) found that parents of Asian American students would be more upset compared to parents of Latino students, if their children make a "C" grade. The same study also found that high parental pressure also correlates with high parental disappointment and feeling upset if their children receive a "C" grade. In addition, Asian American parents have higher educational expectation for their children compared to parents of other races, with over 80% of Asian American parents expecting their children to graduate with at least a Bachelor's degree (Peng & Wright, 1994).

Not only are Asian American students faced with the pressure to excel in their academics, they may also be compelled to choose culturally sanctioned fields such as medicine, science, or business (Yee et al., 2009). Careers in these fields are considered acceptable because they are perceived by Asian American parents to be the most economically viable and socially rewarding (Yee et al., 2009). As a result of living up to the *model minority* standards and family expectations, many Asian American students forgo personally interested careers for ones of which their families would approve. According to Sue and Sue (2009), choosing a career outside of what are considered “appropriate” careers might result in conflicts between family members. In a recent study, Naumann et al. (2012) found that Asian American students perceive a low sense of support by their parents regarding their choice of major. As a result, Asian American students often forgo a major of interest for one of the “more appropriate” majors in areas of math, science, medicine, or business in order to please their parents.

Perceived Academic Competition

In the present study, perceived academic competition was defined as the unstated expectation from the heritage culture to provide tangible evidence of academic superiority over others (e.g., making good grades, being in the right major, and having the right job, etc.). This definition was developed to reflect the occupational values endorsed by Asian American undergraduate students (Leong, 1991). The tangible evidence of academic superiority over others is often used as indicators of success and a measure of comparison. Asian culture uses these tangible success variables to burnish the family name as well as bring honor and prestige (Tao & Hong, 2014). These success

variables in turn augment the family's position in Asian community. Academic achievements are used to enhance the status of the individual, but more importantly, enhance the status and honor of the family (Uba, 1994). These are motivators for Asian Americans, especially students, to work hard to succeed academically so that their family can benefit from these successes. As strong as these motivators are, it can be stressful for any person to bear the responsibility of keeping the family name and honor. For these reasons, Asian American college students might experience considerable amount of pressure to succeed, and this need to succeed is made more salient by their Asian American peers and their peers' academic success.

Competition and Motivation among Students

Asian American students often choose careers with high salary and prestige (Xie & Goyette, 2003). Likely fields that have high representation of Asian Americans include physical sciences, biological sciences, engineering, computer science, and business (Xie & Goyette, 2003). However, these fields are competitive and with Asian American students aiming for similar goals as their Asian American peers, therefore academic competition is likely to occur.

In Asian culture, academic competition is often facilitated by the students' parents. According to Dundes, Cho, and Kwak (2009), Asian parents are more likely than Caucasian parents to compare the accomplishments of their children with the achievements of their friends and relatives' children's academic achievements. Asian parents believe that this would be a good strategy to get their children to perform well academically. Since hard work and effort are strongly emphasized over natural ability in

Asian culture, Asian students are taught to not give up and if they “work hard enough,” then they will succeed (Dundes et al., 2009; Choi & Nieminen, 2013). The focus on effort and hard work bring with it tremendous amount of pressure as students strive to give their best effort in order to obtain academic success. This aim of academic success comes with it some maladaptive academic strategies that may come at the cost of creativity and critical thinking (Stankov, 2010). Creativity and critical thinking may be influenced by what students focus on when they take in information and what their learning goals are (Ng, 2003).

Lam, Yim, Law, and Cheung (2004) found that among Chinese students in secondary school settings, competition drives them to have more performance goals in place of learning goals. That is, in a competitive setting, students are more likely to focus on their performance and the positive evaluation of their work instead of focusing on learning and understanding the materials.

Competition also influences students in the way they evaluate themselves after they fail to meet their performance goals. Students who fail to meet their performance goals tend to give themselves more negative self-evaluation. Given that the students in Lam et al.’s (2004) study were in seventh grade, it indicates that this sense of academic competition is something that starts early on in the students’ academic career (Lam et al., 2004). In East Asian countries, such as South Korea, Japan, Taiwan, and Hong Kong (now part of The Republic of China), students have to pass competitive national examinations in order to get into college. Students compete with one another for high test scores since that enhances their chances of entry into prestigious universities and

high-status fields such as medicine and law (Choi & Nieminen, 2013). Occupation in prestigious fields such as medicine and law can bring great honor to a family and burnish the family name. Since Asian culture is collectivistic, the achievement of one member of the family is a representation of the achievement of the entire family (Stankov, 2010). On the other hand, Asian students are saliently cognizant that academic failures not only reflect poorly on themselves, but more importantly, on their family. It is this fear of shaming the family that motivates Asian students to work diligently and to put tremendous effort into their academic work.

Purpose of Study

The purpose of this study was to explore and understand perceived academic competition among Asian American peers. This study attempted to explore how Asian American undergraduate students perceive their academic successes and/or shortcomings in comparison to other Asian American undergraduate students in their peer group. This study sought to understand the academic pressure that Asian American students experience due to the perceived academic competition with other Asian American peers and how the pressure to succeed academically affects their overall well-being, self-esteem, and mental health.

Method

The concept of perceived academic competition among Asian American college students have not been explored in the current literature. As such, the use of a qualitative approach would be appropriate to explore and understand this phenomenon. According to Creswell (2007), qualitative research is utilized when “a problem or issue

needs to be explored,” there is a need for a “complex, detailed understanding of the issue,” to “understand the contexts or settings in which participants in a study address a problem or issue,” to “help explain the mechanisms or linkages in causal theories or models,” and to “develop theories when partial or inadequate theories do not adequately capture the complexity of the problem” (p.30-40).

The current qualitative study was conducted from an interpretive paradigm, with the following assumptions: a) reality is construed through understanding of self and others based on our experiences and interactions in our environment, b) we cannot separate ourselves from what we know, c) knowledge and findings emerge with the investigation process, d) we understand our world through meaningful interpretation of events that occur, which is influenced by current time and location, and e) interpretation is open to re-interpretation and negotiation through dialogue (Angen, 2000). Interpretive paradigm also uses interviews with the investigator as the main data collector (Richardson, 1995). This methodology is congruent with the use of focus groups as means to gather information of this current study.

Rationale for Utilization of Focus Groups

The utilization of focus groups to explore the concept of perceived academic competition was an appealing choice because of the exploratory nature of focus groups. According to Steward and Shamdasani (1990), focus groups can be useful when there is little information about the topic of interest. Additionally, focus groups are also ideal for gathering general background information about a topic of interest and also for the generation of research hypotheses based participants’ responses and discussions.

Additionally, exploratory focus groups have been utilized with different participants, including college students on college campuses, for topics ranging from multicultural programs on campus to perceived racial health disparity (Lynch, I., & Nowosenetz, T. (2009); Mallinckrodt, B., Miles, J., Bhaskar, T., Chery, N., Choi, G., & Sung, M. (2014); Zekeri, A. & Habtemariam, T., (2006)).

Another rationale for the utilization of focus group for this study was due to time constraints on both participants and the researchers involved. Focus groups allowed the researcher to explore an interested topic with multiple viewpoints at one time as compared a one-on-one interviews, which would have taken multiple dates and times to complete. To summarize, focus groups were the most efficient means to gather information due to time constraints.

Sampling of Participants

At the initial stage of this study, I, the Primary Investigator, researched the different types of Asian American student associations at a large research institution in a southern state of the United States, using the Student Activities website of the institution. Then, I identified 17 potential cultural student organizations that were possible for recruitment. Afterward, I submitted an application for the study to the Institutional Review Board (IRB) at the institution where the recruitment took place. After IRB approved the study, I emailed the presidents and the contact person/liaisons for all 17 student organizations asking for permission to attend the club meetings to speak to their club members about the study and recruit interested participants. After obtaining the approval and consent of the president of an organization to speak to their club members,

I attended a meeting and addressed the members of the club using an IRB approved script (Appendix B). After the short speech, I passed around a sign-up sheet during the club meeting for interested members to write down their names and contact information. After attending two club meetings, 12 club members expressed interest in participating in the study and provided their contact information. Later, I contacted the interested members via the provided emails to set up the time and date for one of the two focus groups. Two focus groups were utilized for this study with the rationale that it was an optimal situation, given that the smaller groups enabled more discussion without overcrowding (Rabiee, 2004). I provided the interested participants two options and asked them to come on the date and time that was best suited to their schedule. I also provided the participants with the location where the focus group would take place, which was an approved-for-use classroom on campus.

As noted, I utilized a classroom on campus to facilitate the two focus groups. The glass portion of the door was covered to ensure confidentiality of the participants. The participants were provided with pizzas, drinks, and snacks prior to the start of the focus group.

I also provided the participants with an IRB approved informed consent (AppendixA) and explained any questions at the beginning of each focus group meeting. The participants did not have any questions in both focus groups. After ensuring that each participant understood the informed consent, I then handed each participant a demographic sheet to fill out. Refer to Appendix C for specific questions on the demographic sheet.

Data Collection

There were a total of 11 student participants, with five participants in the first focus group and six participants in the second focus groups. A Co-Investigator (a doctoral student) and I facilitated at both focus groups and utilized the same set of questions both times. The two sessions were audio taped using a digital handheld recorder. Refer to Table 1 for demographic information for the participants in the two focus groups. Six male and five female undergraduate students participated in the two focus groups. Of these 11 participants, three were born outside of the United States. Their time lived in the United States ranged from four years to ten years. Their age ranged from 18 to 24 years old. Of the eleven students, seven identified as Vietnamese American, three identified as Chinese American and one identified as Japanese American. The participants' academic status included freshmen, sophomore, junior, and senior. One graduate student attended the focus group with a friend and asked to participate. The Co-Investigator and I decided that his input may be valuable to the conversation so he was invited to stay and participated in the group discussion. This participant noted that he was a first year graduate student who had recently graduated from undergraduate studies. Since he recently graduated from college, his academic experiences with peer were still recent and there was no significant discrepancy between him and the seniors who participated in the focus groups. For these reasons, his input would reflect the experiences of the students who participated in the focus groups.

The Co-I and I actively participated in the discussion due to the similar educational experiences with the participants in the two focus groups. I am a first

generation doctoral student in counseling psychology of Vietnamese American background. I have lived in the United States for more than 20 years after emigrating from Vietnam. The Co-I is a second generation, of Taiwanese American descent, and also a doctoral student in counseling psychology. The Co-I and I are both bi-lingual and are able to communicate in Vietnamese and Chinese respectively, in addition to English. The Co-I and I shared past educational experiences as appropriate with what the participants discussed.

The two focus groups lasted approximately over one hour and 13 questions were utilized. See Appendix D for more details about the 13 focus group questions. Participants shared whatever information was relevant to them, usually adding to what another member had responded.

Data Analysis

The participants' responses were transcribed verbatim after the conclusion of both focus groups. After the audio recording from both focus groups were transcribed, the Co-I and I independently read the transcripts once over to remind ourselves of the content of the groups. Then, we read each line of the text and underlined any keyword or phrases that were related to the definition of perceived academic competition as well as underling reoccurring key words or phrases that were relevant to the participants' experiences related to perceived academic competition. Once the words or phrases were underlined or bracketed off, we then attempted to categorize the underlined data units and generated codes for the data units. We then utilized the codes to identify common themes that emerged the focus groups. The identified themes were compiled in a list.

Then, we repeated the entire procedure for the transcript of the second focus group and compared the themes for both focus groups. The Co-I and I independently identified the themes that emerged and then met to discuss what we found based on our analysis of the two transcripts.

Common themes identified by both the Co-I and me were discussed further and elaborated. Themes that were not present on one investigator's list of themes were discussed and elaborated to meet consensus between us using the participants' answers. Similar themes generated by both of us were discussed and combined to make one representative theme based on the participants' responses. Additionally, the label for each identified theme was presented and discussed by both the Co-I and I to reach an agreement that the label best represents the specific theme. The result of this discussion by both investigators was a relabeling of themes as well as a better conceptualization of the participants' experiences regarding perceived academic competition.

Results

Eight themes emerged after analysis of the transcribed responses from the two focus groups of Asian American undergraduate students. These themes are: 1) more perceived academic competition in high school due to proximity of Asian peers ; 2) less pressure in college, especially in majors with low numbers of Asian students; 3) perceive less pressure from parents in college because of geographical distance and more pressure in high school due to proximity; 4) internalization of parental expectations so the pressure to succeed comes from within; 5) frequent comparison of academic success to relatives or friends' children's successes; 6) financial stability is important ; 7) sense of

indebtedness to parents, which adds to the pressure to succeed; and 8) self-efficacy and self-confidence are influenced by parents.

Theme 1: More Perceived Academic Competition in High School

There was a consensus among the 11 students from both focus groups that they perceived more academic competition when they were in high school. A possible reason for this could be the proximity of their Asian American peers and the saliency of their peers' academic successes in terms of grades, awards and recognitions, class standing, and SAT/ACT scores. One student stated, "My high school was very, very competitive. I went to a magnate high school. [...] there was always competition because we all have the same track; we all have the same classes." Another student concurred by saying:

You're in this bubble in high school. We're surrounded by the same type of people. [...] But in college, when you go to classes there are different people. There are a lot more people so you're not competing with them because you don't know them as well.

Another student agreed that there was more perceived academic competition in high school because of similar classes that students take as well as similar people that they frequently interact with. However, in college, the participants pointed out that being in a "really different major" without anyone to compare to is "kind of a relief being out of high school because high school was so small." One participant stated:

I think in high school, especially a lot, some of my friends were Asians, maybe half. Because we were all aiming for the top ten percent or top ten spots, I felt

that competition was a lot higher because you're all kind of in the same boat and trying to get into limited spots.

Another participant provided an example of her experience in high school. She said, "When SAT scores came out, everyone was walking around with that asking, "What's your score?' What's your score?""

From the students' response, it appears that the students perceived more academic competition among their Asian American peers. A reason for this could be due to the proximity of the peers and the number of classes that they take together. This makes competition among each other more salient.

Theme 2: Less Pressure and Academic Competition in College

Following the first theme, the majority of the participants in both focus groups agreed that they perceive less academic competition and less pressure to succeed academically in college. This is especially true for the participants who are in majors that they perceive have a smaller number of Asian American students. One participant stated, "I felt competition in high school. When I got here, I don't really feeling competition at all." Another participant added, "I'm in a really different major so I don't really experience that (academic competition). I'm taking classes about xxx so I don't have anyone to compare to." One participant added, "The best thing about college is there's no ranking." She added, "My dad would ask me every month what my rank was and I ended up being Salutatorian but it still wasn't good enough."

Another participant observed that his major does not have a large number of Asian American students so he does not feel any academic competition with the other

students in his major. He stated, “I don’t feel anything honestly. I feel mainly because I don’t ever talk to them so I never know how well they’re doing in class so I don’t worry myself over that.” He also went on to state that he does not believe the other students in his major are very intelligent and does not feel threatened by them. To add, one participant stated, “For me, most of my peers are White. Whether they’re smart or not, I don’t really know because I don’t really talk to them.” Another participant stated that “the pressure is definitely higher in high school, middle school, but once I got to college, and everyone went towards medical, to engineering, and I went my own way and it wasn’t the same.”

It appears that from the participants’ responses that they perceive less academic competition from their Asian American peers and mainly non-Asian American peers in college. For participants in majors with small numbers of Asian American students, the perceived academic competition appears to be less. However, for majors with a large number of Asian American students, there appears to be some perceived competition. One participant acknowledged that academic competition depends on the courses that they are taking. She said, “I do feel some competition but only in certain classes. Some classes are easy classes I don’t feel as much, I don’t work as hard, the harder classes I do. I feel competitive in certain classes over others.” Another participant shared her point of view and said:

There’s really no sense of, like humanities or an arts class, there’s never the feeling like you have to compete. But in my anatomy class, whenever I go to lab and before we take a quiz, we’re always quizzing each other. I feel like when we

quiz each other before hand, A) one to help each other to actually get a good score , and B) to intimidate each other, like showing what you already know. This suggests that perceived academic competition appears to be present, but maybe experienced more often in some courses than others.

Theme 3: Less Parental Pressure in College, More Parental Pressure in High School

The participants listed their parents and their parents' involvement in their academics as a source of pressure for them. From the participants' responses, it appears that they perceive less parental pressure while away at college as compared to feeling more pressure when they were in high school. This could be due to the proximity of their parents and how involved their parents are due to the proximity. One participant summed this up with:

Location wise, it definitely affects how involved they (parents) are. Yah, like since I'm like three hours away they don't check on me as much and they don't feel the need to. Basically they only check on me whenever I go home. Basically the GPA will speak for itself kind of thing.

Another participant added, "My parents pushed me a lot, especially during high school. They don't really, they sort of keep tab on me still but not as much because I'm away." Even though they may be away from their parents while at college and thus feel decreased pressure, the pressure is still present. For many of the participants, they have learned to set high standards for themselves in college based on their experiences while in high school. So even though their parents are not physically there to monitor their academic performance and progress, the participants have internalized what their

parents' expectations are and strive to live up to those standards. Often, this can lead to feelings of distress and guilt if they do not meet those expectations.

Theme 4: Internalization of Parental Expectations

A major theme that had consensus from both focus groups was that the study participants learned to place the pressure on themselves to succeed because they had internalized their parents' expectations. One participant summed this up with:

I think they did push me harder to get good grades in middle school and high school, but eventually I started doing that myself. The pressure, I put that on myself now. And if something goes wrong, I would blow up, instead of them (parents) being mad at me, I would be mad at myself for doing something.

Another participant added, "because of the way my parents raised me because they're like 'oh you make bad grade, we're hard on you therefore when you do make bad grades, you should be hard on yourself.' It's kind of like that conditioned thing." One participant agreed with this outlook regarding internalization of parental expectations and standards. He said, "They (his parents) finished the life training already." He went on to say, "I've been trained to know that there's punishment" if "I fall through."

Another participant compared this to wearing a shock collar. He said, "It's like they shock the collar that dogs wear, like you don't want to get zapped if you cross the line." The line refers to performing below what is expected.

In terms of internalization of parental expectations, many participants agreed that even though their parents pushed them to work hard when they were in middle and high school, eventually they learned to push themselves. As one participant said, he has been

“trained” by his parents to know what standards he should be at and what the consequences are if he fails to meet those standards. One participant shared that his parents will force him to move back home and attend a college closer to home if his GPA falls below a 3.5. For other students, they place the pressure on themselves to succeed because they are afraid of letting their parents down.

Theme 5: Comparison of Academic Successes to Others

For many Asian American students, a source of stress and pressure comes from the comparison that their parents make between them and family friends and relatives of the same age. One participant expressed that his parents often compare him to his older siblings who are doctors and pharmacists. Another participant said, “I have an older brother, he’s like fifteen, sixteen years older than I am. He’s a doctor and my parents do occasionally compare us two together.” One participant said that her mother does not place too much pressure on her but she feels pressure when her mother talks to her relatives about her performance in school. Another participant shared a similar situation stating:

Me, coming from a family of lawyers and engineers so if I don’t do well then my mom is going to have to talk to my family, she’s already talking to my family that I’m doing pre-optometry, eye doctor. She’d say, “Oh, my daughter is going to be a doctor.” She’s already announcing that to everybody and I’m nervous.

It’s very nerve racking.

This participant expressed that she feels anxiety and nervousness thinking about what would happen if she fails in living up to what her mother had announced – that she

would be an optometrist. In meeting her mother's expectations for her future, the participant stated that she had to change her major from a major of her liking and personal choice to pre-optometry, which she disclosed is not a good fit for her.

One participant shared similar feelings of anxiety regarding having his future career announced prematurely by his parents. He said:

My parents are very involved in Vietnamese church back home. And so when I first entered college, I was premed, and so they were like "doctor, doctor, doctor" and I guess that's why they were upset that I changed because then they had to be faced with the whole reputation part, the social reputation part and they're angry with me because it made them look bad.

He added that when he attends church at home, his mother is hesitant to talk about his new chosen major. Regarding his new chosen major and career path, he said, "There's nothing wrong. It's still a doctor degree but it's not six digits. So that's what they disapprove of, it's the monetary value of the degree."

Another participant in the group shared a similar situation. She said, "I'm majoring in accounting, but I don't like it. I've always wanted to major in marketing instead, but yah. Like the future will be different so I just keep accounting." The different future that she is referring to is in terms of job security and financial security. For many of these participants, they often change from a major of their liking and personal choice to a major that they deemed is acceptable and appropriate according to their parents. These majors will often provide a stepping stone towards a career that would ensure job security and financial security.

Theme 6: Financial Stability is Important

The participants from both focus groups expressed a common theme regarding the importance of financial security for their futures. According to the participants, financial security is one of the reasons for the career choices that they make. One participant stated, “For my parents, the only thing that they really want me to go into was the social sciences. That’s what they expressed because just seeing how you need to be able to make money basically.” For others, they learned of the importance of financial security by watching their parents struggle. One participant shared her point of view:

They (parents) always told me to make enough to provide for my family, but I kind of have higher expectations. Because I see our lifestyle and our society, people do make money for the luxuries so I want a job that pays more to provide my family with necessities and the luxuries.

To add, another participant said, “The way they (parents) raised us up was that you have to be able to provide for your family, so you always have to meet these credentials, you have to do well.” Still for others, it is a cultural belief that the man should be the provider for his family. One participant stated:

In my family, I guess my parents always say that the guy has to be the head of the household and has to be able to support the family. And from my understanding, I think guys are usually seen as the foundation for the family. You’re supposed to provide the financial means to do anything.

Still, financial stability and security is seen not only for males but also for females. One female participant added to the above statement with:

I feel like my parents not only emphasize that on my brother, but also on their daughters because my mom didn't have that opportunity, like financial stability, so she wanted to make sure that me and my sister can provide for our own and not depends on guys.

Many of the participants had a general idea of what their future income should be in order to be comfortable. One participant stated, "Now that I'm seriously, actively looking for a job, I have some salary standards or vague sense of what salary range I want." The participants in both groups expressed a common desire to make enough money in the future to be able to provide for their family. It appears that this stemmed from their parents' influence as well as some internalized concepts of what lifestyle they would like to have as well as the monetary value of their desired lifestyle.

Theme 7: Sense of Indebtedness to Parents

Many of the participants from both groups expressed feelings of indebtedness to their parents and did not want to "let their parents down" if they do not enter into the careers that their parents wanted them to. The feeling of indebtedness also adds to the pressure that the participants feel and thus magnifies their failures and successes. One participant said, "I'm still feeling like I could still let my parents down."

The participants expressed that since they feel indebted to their parents, they believe that by fulfilling their parents' expectations will help them repay their debt. One participant expressed this thinking by stating, "I always feel like I owe my parents. So in return

they never ask for anything back, but you kind of feel like you need to fulfill those expectations they have of you to make them happy.” One participant had started to “repay” his parents through his actions. He said, “The only thing I help them with is like, my brother and I help, we pay the cell phone bill. We switch off every month. That’s the only thing we really repay but we help them out in others ways.”

Recognizing that his parents have limited English skills, he and his brother help their parents with letter writing, paper work, or other items that needed translation.

Another participant discussed the feelings of pressure and indebtedness to his parents because of their sacrifices. He said:

I definitely had that pressure for a long while throughout college. And I realized, yes, most of my work ethic does come from ‘Hey, I need to make a better life for myself than my parent because that’s what they’ve worked for this whole time.

Another participant from the same group added:

Well I feel like when I’m not doing well then I’m letting my parents down because they came over from Vietnam too, and they eventually were able to go to college and became successful so I feel like if they could do it not knowing English nor having any of that primary U.S. education, then it should be easier for me; and I should be able to do it too. And if I’m not able to do it then I feel like I’m letting them down because if they could do it, and I should be able to do it too.

For the participants, even though they admitted to feeling pressure and anxiety due to the expectation placed upon them by their parents as well as the feelings of indebtedness to

the parents, they acknowledged that these feelings act as motivators for them to succeed. It appears that the participants believe that by living up to their parents' expectations of them regarding their future careers and successes, they are repaying their parents for their sacrifices. For many of the participants, they had to choose between a major and potential career of their liking in order to pursue majors and careers that would allow them to repay their parents.

Theme 8: Self-Efficacy and Self-Confidence Influenced by Parents

Even though the participants reported that they were doing well in their courses and were academically successful, they still felt that these successes and their academic performance was “not good enough” according to their parents. One participant said, “Most of the time, when grades are unsatisfactory, or they’ll ask like, ‘How do you fair against your other friends’ and stuff. They won’t outright say ‘oh, this is bad, you need to do better,’ they’ll just subtly disapprove.” Another participant discussed not feeling good enough:

For me, my parents always give me this feeling like I’m never good enough, ever good enough. [...]. For my sister and I, we came after my brother and they’re just ‘you’re not good enough, you’re not good enough, you’re going to deviate from what we want you to do like your brother did, so that’s what they expect us.

She also added, “Any grades I get, they just say ‘oh it’s not good enough, you could have done better.’” In addition, her parents also commented on how she could have chosen a better major and scrutinized what she should have and should not have done.

Another participant talked about how her father made her feel for not being valedictorian. She said:

My dad would ask me every month what my rank was and I ended up being salutatorian, but it still wasn't good enough. I was so close to being valedictorian. It was a technicality thing; so it sucked. That eats me up for months. I was on stage and I couldn't make a speech. I couldn't say I was number one.

She later added that her father also compared her younger brother to her with statements such as "Why weren't you like your sister?" and "She was number two at least."

From the viewpoint of the participants, it seemed that even though they try to achieve academic successes by making good grades and making compromises with their chosen majors, their parents are not fully satisfied with their choices. The participants who are in economics, engineering, and computer science majors reported that their parents are satisfied with their majors as compared to the participants who are in allied health majors and social sciences majors. From the participants' answers, it appears that this idea and belief that they are not "good enough" have been ingrained within them since grade school. This then carried over to their college years and added to the pressure that they have experienced.

Discussion

The purpose of the current study was to explore and understand perceived academic competition in Asian American college peer groups using social comparison theory as a basis for understanding this concept. Based on the responses provided by the

Asian American students in both focus groups, it appears that the most academically competitive periods for Asian American students is during high school and middle school. A possible reason for this is that they have to take the same courses as their Asian American peers. Another reason could be that proximity of Asian American students to each other, which makes their academic accomplishments or lack thereof, more salient to them. As such, social comparison theory appears to be more salient and more relevant to understand the students' academic experiences during the middle school and high school period. Student ranking, grade point average, the number of college acceptance, acceptance into prestigious higher education institutions can act as *standards* for upward and/or downward comparison (Blanton, 2001). The participants shared experiences while in high school that suggest that they were aware of their Asian American peers' academic performance. This awareness of peers' academic performance make salient where the participants are on in relation to their peers, their *target stimuli*.

Although the experience of academic competition was salient to the participants, especially during their high school years, it appears that they were uncomfortable with the academic competitiveness that was occurring in their high school. The participants spoke about the academic competitive environment in a matter of fact mannerism. From the responses, it seems that the participants were contributing to the competitive environment, be it they wanted to or not. It also appears that the parents also played an important motivating factor in contributing to the competitive environment during the high school years. This was evidenced by the parents inquiry about grade point

averages, test scores, and class ranking. These parental influences are congruent with the literature about parental expectations (Ang & Huan, 2006)

The students also discussed the level of involvement their parents had in their academic performance in high school as compared to college. They reported that their parents were more aware, asked more questions about their performance and progress, and knew more about how they were doing in relation to their friends and relatives. Again, proximity appears to play a role since as students in high school, they live at home, making it easier for their parents to keep track of their progress. In addition, parental involvement during the high school years could be due to their desire to see their children obtain academic success, which could be admission into a prestigious school (Lowe, 2009). Once their children get to college, the parents' involvement may have lessened because the goal of getting their children into a college has been met. Even though the participants reported that their parents are not so involved once they are in college, many of them reported that they still keep their parents updated on their academic progress so they do not worry. In addition, as one of the students stated, "they have internalized their parents expectations" and recognize the consequences of failure.

Results of the focus groups echo the findings in the literature regarding the importance of Asian parental expectations on their children. Similar to findings by Saw, Berenbaum, and Okazaki (2013) and Dundes et al. (2009) many of the participants in the current study reported that their self-efficacy and confidence are influenced by their parents' beliefs about what they are capable of doing. The parental pressure to perform

better and to work harder can add stress and create anxiety, which can negatively affect the students' overall well-being (Oishi & Sullivan, 2005; Stankov, 2010).

What the results from the current study do not echo in the current literature is the difference in levels of academic pressure and academic expectations perceived by Asian American students in high school versus in college. The study demonstrates that Asian American students perceive more academic pressure and expectations from their parents during their high school years as compared to their college years. The proximity of their parents could be a contributing factor for the increased pressure while in high school as opposed to their college years, where they may live further away. Another interesting finding from this study suggests that Asian American college students in majors with less Asian American students do not perceive as much academic competition as compared to their Asian American peers who are in majors with more Asian American college students. It appears that the proximity to other Asian American peers also contribute to the level of perceived academic competitive experienced by Asian American students.

Implications for Practice

The current study has implications for clinical practice when it comes to counseling Asian American students, especially with career counseling. The study also presents a better understanding of the relationships between Asian American college students and their Asian American peers on campus. In terms of career counseling, it is important to understand the students from a multicultural perspective. In addition, the

study identified different sources of stress and pressure that Asian American college students experience.

Asian American Career Choices

In terms of choosing the “acceptable” and “appropriate” careers that would please their parents and meet their parents’ expectations, many Asian American students have to forgo their own liking and career choices (Naumann et al., 2012). As discussed by the participants in both focus groups, many of them have made compromises in terms of choosing a major that would allow them to have the careers that their parents would approve of. Even though their chosen majors would allow them to have a good career and financial security, they still feel that their majors and future careers are not good enough to please their parents.

This finding has implications for career counseling Asian American students and other students of Asian cultural backgrounds. The responses and statements made by the participants in the study show that career counseling with Asian American students might be complex and challenging when considering different factors involved in the students’ career decision making. The participants in this study listed their parents as a main source of influence when it comes to choosing their major. This is consistent with the literature on Asian American students and academic expectations from their families (Uba, 1994).

One factor identified in this study that could have great implications for career counseling with Asian American students is the careers and majors of close relatives in their family. For many of the participants in this study, they feel the pressure to live up

not only to their parents' expectations but also to the achievements of their peer relatives. This is due to their parents' comparison and discussion of their academic achievements and successes. In many instances, the parents would use their children's successes as a way to compete with one another. Since many of the students do not want to bring shame to their family name by not living up to what their parents have announced regarding their future careers such as being a doctor or lawyer, they feel great anxiety whenever they fail to make the grades to pursue a certain major or career. For some participants, they may remain with a major even though they are failing their courses because they do not want to bring shame to the family by switching to a different major and pursuing a career that is different than what their parents have announced to friends and relatives. These are important factors to consider for career counseling with Asian American students.

More Parental Pressure and Academic Stressors in High School

One interesting finding that stemmed from this study is that Asian American students perceive more academic competition with their Asian American peers in high school than in college. One reason for this could be the proximity of their Asian American peers and the saliency of competition due to that proximity (LeTendre, 1996). As the participants related, they take the same courses and are constantly aware of how each other are performing. Also, the structure of high school settings with elements such as SAT scores, class ranking, and percentage ranking add to the heightened sense of competition among Asian American peers.

In addition, Asian American high school students reside with their parents and thus are constantly reminded of how they should be performing in school and are compared to their peers academically (Qin, 2008). For students and their families who live in cities with a small Asian community, the families might know each other and thus, the chances of comparison between their children are heightened due to the size of the community they live in. Once the students are away in college, their parents do not have as many opportunities as they used to monitor and inquire about their children's academic performance so the pressure is lessened at college as compared to in high school.

Thus with Asian American students, it might be best to address their academic pressure earlier on rather than wait until they are in college. School counselors might be able to help Asian American middle and high school students identify, understand, and resolve their stressors early on by providing them with some coping skills such as stress reduction techniques to manage their anxiety and stress related to their academic pressure. School counselors could also provide workshops to educate parents about different careers in career fields other than science, technology, engineering, and mathematics to increase their flexibility and openness to their children's career options.

Pressure from Comparison with Relatives and Known Peers

Another interesting finding that rose from this study is the stress and pressure that Asian American students experience due to being compared with their peer relatives and the children of their parents' friends. Some participants noted that coming from a family of lawyers and engineers add considerable pressure on them to have careers that

are on par with their relatives' careers so their parents are not ashamed. Other participants feel the pressure to be the "mirror" or the role models for their cousins in terms of achievement. This suggests that even though Asian cultures are collectivistic, it appears that there are internal competitions among members of the same family and relatives. It would be important for therapists and counselors who work with Asian American students to understand the dynamic of the different members of their families as well as close relatives in terms of achievement and academic successes to help understand the academic pressure that the students may be facing.

Implications for Research

Creation of a Quantitative Measure

The current study utilized a qualitative method to understand Asian American students' experiences related to academic competition with their Asian American peers so future research should focus on a quantitative mean to understand this phenomenon. The identified themes and participants' responses could be utilized to generate a scale about academic competition among Asian American peers. This would make understanding the experiences of Asian American students and their peers more rounded and complete.

Academic Expectations and Academic Pressure from the Parents' Perspectives

The current study was from the perspectives of the students so it would be interesting to understand the students' academic competition from their parents' perspective. More specifically, it would contribute to research of academic expectations and pressure from the parents' perspectives to understand if they are aware of the

academic pressure that their children experience. There may be incongruence between what the parents' perception of their children's academic pressure is versus their children's actual level of academic pressure. One or two focus groups that bring both the parents and students' perspectives together may produce valuable information about the relationships between Asian American parents and their children as related to academic attainment, expectations, and pressure.

Academic Expectations and Academic Pressure in High School and Long Term Effects

Based on the findings in this study, Asian American students experience more academic pressure in high school as compared to college. Future research can explore how the students' experiences in high school impacts their functioning in college, with regards to their mental well-being. Specifically, future research can investigate the rate of anxiety disorders, depressive disorders, and adjustment disorders that Asian American students may meet criteria for based on their high school experiences related to academic competition and academic pressure. One possible contributing factor for more perceived academic pressure and academic expectations could be the proximity of parents and Asian American peers. Future research could explore how the proximity of living at home with parents and attending high schools with a large population of Asian American peers can influence perceived academic competition, academic pressure, and academic expectations from parents and peers. Additionally, future research can focus on the overall mental wellbeing of Asian American college students living at home with parents and Asian American college students living away from home and compare overall anxiety and depressive symptoms as well as adjustment level to their college courses.

The results from this study can be utilized in clinical practice and for future research. The identified themes provide additional knowledge, specifically knowledge related to how Asian American college students experience their college academic experience in relation to their Asian American peers. The sources of comparison such as peer relatives, children of parents' friends, and other Asian American students will assist clinicians and researchers further understand the academic experience of Asian American students. The current study also identified that the majority of academic pressure and perceived academic competition were greater in high school than in college. This suggests that early interventions in helping Asian American students to manage their level of academic stress and anxiety in the early years of high school may be helpful for overall wellbeing, which could greatly benefit them in adjusting to their college years.

Limitations to Study

The current study has some limitations that need to be addressed. First, the demographics of the student participants were not diverse; the majority of them were Vietnamese American. Second, their generational status was also not diverse since the majority were American born and those who were not have lived in the United States long enough to be assimilated into the culture and do not adhere as strongly to their Asian beliefs and culture as compared to newly immigrated Asian students. Third, the participants were from a large university where Caucasian Americans are the dominant majority and there was a small population of Asian American students. These students' experiences with their Asian American peers on this campus could be different than if

they were on a campus where there is a larger presence of Asian American students. Perhaps then, the perceived academic competition may be more salient, similar to when they were in high school. Given that this study presented a small sample of the experiences of perceived academic competition among Asian American students, more research is needed, with more Asian American students from more Asian ethnic groups in order for the results to be generalizable. Lastly, there are limitations to the utilization of focus groups to gather information. According to Stewart and Shamdasani (1990), one focus group represents one observation rather than individual observation based on the number of individuals in a group. This makes generalizability difficult, given that the data are emic rather than etic in nature. That is not to say that generalizability is inappropriate, but rather generalizability are more generalized in nature rather than specifics. Furthermore, the participants' responses are influenced by responses of other participants in the group so this could limit what each individual would have responded if the study was conducted on a one to one interview format.

Conclusion

The purpose of this study was to explore and understand perceived academic competition among Asian American college students. The findings from the two focus groups suggest that there is perceived academic competition among Asian American college students, but not in all courses. Specifically, Asian American participants in the study reported perceiving less competition in majors that have small numbers of Asian American students such as arts and humanities majors. The participants also expressed that they perceive more academic competition in high school because their peers were

taking the same courses as them and were fighting for the same goals such as high class ranking, getting into a good college, and being in a certain percentile of the graduating class.

The study also identified some factors that explain how Asian American students choose their majors as well as their career choices. One factor is their parents' expectations for their future in terms of career and financial stability. Many of the participants discussed that financial stability and security is a major element in choosing a career and some participants have salary standards for the future. Many of the participants expressed that they are expected to provide for their family, especially if they are a male. Some also expressed that they have a vision of a certain lifestyle and would like to be able to provide their family with that lifestyle. Still with others, seeing their parents struggle also influenced their desire for financial security in the future.

Implications for career counseling and individual counseling as well as future research were discussed based on the results of the two focus groups. The results suggest that it is important to look at the different dynamics in a student's family as well as relatives because of the comparison that their parents may make between them and their siblings, cousins, and family friends of their same age. The current study provides some insight about the academic pressure that Asian American college students experience in addition to the identification of the sources of that pressure.

CHAPTER III

MANUSCRIPT II: ACADEMIC EXPECTATIONS STRESS INVENTORY – A REVALIDATION STUDY

Introduction

Asian American college students experience high levels of academic stress brought on by the pressure to attain academic success and achievement, which is emphasized in part due to the Confucian influence regarding scholarship (Stankov, 2010). Academic success and achievement are believed to bring improved quality of life (Uba, 1994) and are indicators of good family upbringing (Sue & Sue, 2008). In addition, children in Asian families experience tremendous pressure to succeed academically and attain successful careers (Sue & Sue, 2008). As a result of the strong emphasis on academic successes, Asian American students have high levels of academic achievements. However, the negative impact of this phenomenon is a great fear of failure (Sue & Sue, 2008). Additionally, Asian American college students also report high levels of anxiety, depression, and worry as a result of the academic expectations placed on them (Saw, Berenbaum, & Okazaki, 2013; Sue & Zane, 1985; Toupin & Son, 1991).

Academic Expectations Stress

Currently, there is no instrument that specifically addresses academic expectations stress in Asian American college students, even though there is support in the literature for it. However, such an instrument exists that assesses academic expectations stress in Asian middle and high school students who reside in Singapore.

The Academic Expectations Stress Inventory (AESI) is an instrument designed by Ang and Huan (2006) that identifies two sources of academic stress that Asian students experience: from parents and teachers and from themselves.

Ang and Huan (2006) developed the AESI using data from 721 middle and high school students living in Singapore. Exploratory and confirmatory analyses were utilized by Ang and Huan for the development and initial validation for this scale. Exploratory analysis identified a nine-item scale with two factors, parents/others and self.

Confirmatory analysis, with 387 adolescents, suggested good model fit for the two factor structures of the AESI (Ang & Huan, 2006).

Following this development and validation of the AESI, Ang, Huan, and Braman (2007) revalidated the scale with Hispanic and Chinese adolescents. To identify cross-cultural invariance of the AESI, Ang, Klassen, Chong, Huan, Wong, Yeo, and Krawchuk (2009) validated the scale with adolescents from Canada and Singapore. These two studies by Ang et al. (2009) also found good model fit for the two factor model of the AESI with Hispanic and Canadian adolescents. For the Canadian sample, participants' age ranged from 14 to 19 years of age and the Singapore sample's age ranged from 15 to 19 years. The good model fit and high Cronbach's alphas, ranging from .81 to .89, for the study with Canadian and Singapore adolescents (Ang et al., 2009) suggest that the AESI could be utilized as a tool to measure academic expectations stress for undergraduate Asian American college students in the United States. The two sources of academic stress identified on the AESI are reflective of the stress experienced by Asian American college students. For that reason, a revalidation of this instrument with an

Asian American college student sample would indicate if this instrument could serve as a useful tool to assess sources of academic stress and the degree to which Asian American college students experience that stress. The revalidation of the AESI will take into consideration gender and nativity status of Asian American college students.

Parents and Teachers as Sources of Academic Expectations Stress

The vast literature on Asian American college students points to parental pressure to perform well in their academic studies (Dundes, Cho, & Kwak, 2009; Saw, Berenbaum, & Okazaki, 2013; Sue & Zane, 1985; Oishi & Sullivan, 2005; Gloria & Ho, 2003). In Asian culture, the ideals of filial piety is emphasized and constantly reminded. As a result, Asian American students perceive that they have an obligation to honor their parents as well as the family name. For instance, Murphy-Shigetmatsu et al. (2012) reported that there are internal conflicts within Asian American students regarding parental sacrifices. That is, Asian American students in the focus group reported feeling appreciation for their parents' sacrifice and influence in their lives, however, the students also reported having difficulty separating themselves apart from their need to fulfill parental expectations. According to Murphy-Shigetmatsu et al. (2012), the internalized parental expectations create "little room for the development of self, and a struggle with the sense of obligation that left no room for personal desire" (p. 214). Even when Asian American students are exposed to new ideas, interests, and desires when they attend college, their career choices are still heavily influenced by their parents' desires and expectations of them to venture into "appropriate" or "acceptable" careers (Murphy-Shigetmatsu et al., 2012).

According to Leong and Hardin (2002), Asian American college students reportedly experience great amount of stress from their parents and family to succeed academically and to have promising careers once they complete their education. These students tend to gravitate towards careers in medicine, law, and engineering since these fields are seen as more prestigious and will bring higher status to the individual (Lowe, 2009). However, these fields require tremendous amount of time and dedication in order to succeed, and Asian American students who choose to pursue these fields must work hard keep up with their academic demands, not fall behind, and to succeed. If they do not succeed academically, it means letting their parents, family, and the family name down (Yeh & Huang, 1996). Knowing the consequences of failure, these students feel added pressure to succeed. For students who are having difficulty in the chosen major, they might find it difficult to let go and focus on another path that they would succeed in fearing that this would upset their parents and let them down.

Additionally, Sue and Okazaki (1990) argue that educational attainment and non-educational attainment is a function of the desire for upward mobility in society. For Asian Americans, education has become “salient as a means of mobility” given that mobility is “limited in non-educational avenues” (p. 173). This idea of using education as a ladder for upward mobility in society is especially true if the parents are uneducated (Dundes, Cho, & Kwak, 2009). According to Dundes et al. (2009), children of low-skilled, uneducated, and impoverished parents are expected to excel in their education since educational attainment is perceived as a ticket out of poverty and as a mean to burnish and bring honor to the family name. As a result, the expectations of high

educational achievements can put a tremendous amount of pressure on Asian American college students (Sue & Sue, 2008; Toupin & Son, 1991).

Asian culture, specifically Confucian influenced culture, stresses the importance of meeting the expectations of important others such as parents and teachers because the failure to do so could lead to a loss of face for one self and one's entire family (Yeh & Huang, 1996). Moreover, Asian children are taught at a young age to be aware and conscientious to the opinion of important individuals such as their parents and teachers (Ang & Huan, 2006; Yeh & Huang, 1996). As such, when they are in an academic setting, Asian American students will be greatly influenced by the perceived academic expectations from their teachers and respond accordingly to those expectations (Ang & Huan, 2006).

Teachers' academic expectations of Asian American students can impact their performance. According to Cheng and Stark (2002), Asian American students are viewed by their teachers as having high aspiration in their educational attainment as compared to White, Hispanic, and African American students. As such, teachers' expectations and perceptions of Asian American students could lead to differential treatments, which could lead to self-fulfilling prophecies (Chang & Demyan, 2007). Additionally, Chang and Demyan's (2007) review of the literature suggests that teachers' perception on Asian American students also include the following characteristics, "cooperative, self-controlled, eager to please, perfectionist, academically successful, having fewer behavioral problems, less assertive and less expressive" (p. 92-93). As such, teachers are not as likely to call on Asian American students as a result of

these perceived stereotypes of passivity and lack of expression (Chang & Demyan, 2007). This may lead to continuation of the cycle of passivity and lack of expression by Asian American students.

Another possible outcome of such perceptions by teachers could lead to stereotype threat. Stereotype threat is the “implicit knowledge and activation of stereotypes” (p.93). For Asian American students, perceived positive stereotypes have shown to diminished performance on mathematics tests. As such, teachers’ expectations of Asian American students to do well academically in the stereotyped fields of mathematics, science, and engineering as well as uphold the *model minority* characteristics may lead to diminished academic performance and increased anxiety and stress. This suggests that teachers could be a source of academic expectations stress for Asian American students. As such, teachers could inadvertently expect Asian American students to meet academic standards that are based on stereotypes formed by the *model minority myth*. When students fail to meet these expectations, they feel shame and embarrassment. Often, they may not seek help in subjects that they are deemed to be capable and excel in such as mathematics and science. As a result, they struggle and experience academic stress without seeking assistance from their teachers (Lee, Wong & Alvarez, 2009).

Self as Source of Academic Expectations Stress

Another source of expectation stress for Asian American college students stems from internalized parental expectations (Gloria & Ho, 2003; Oishi & Sullivan, 2005; Saw, Berenbaum & Okazaki, 2012; Tao & Hong, 2014). It is important to look at the

extent to which Asian American college students have internalized their parents' expectations and look at potential compromises that they have generated in order to meet their parents' expectations but also maintain their own desires and interests in deciding on majors and future careers. For Asian American students who decide to go their own path and against their parents' expectations and wishes, the feelings of guilt and selfishness persist, which lead to them unable to truly enjoy the paths they have chosen (Murphy-Shigetmatsu et al., 2012). For other Asian American students, the fear of disappointing their parents may prevent them from pursuing the career choices that they are truly interested in. As such, Asian American students who live under strict parental rules with rigid academic expectations have reported feeling "stressful" and "full of pressure" (p. 211).

Furthermore, well-being and self-efficacy are related to how Asian American college students perceive they have lived up to their parents' expectations of them (Oishi & Sullivan, 2005; Chen & Ho, 2012; D'Lima, Winsler & Kitsantas, 2014). Saw et al. (2012) found that Asian American college students reported that they were not living up to their parents' expectations in the areas related to school and family, which greatly influence the level of worry that Asian American college students experience.

Another important contributing factor to the self as a source of academic expectations stress is the internalization of the *model minority myth*. According to the *model minority myth*, Asian Americans are able to achieve great academic and economic success due to hard work and not straying from their cultural teachings and norms (Lee, Wong & Alvarez, 2009). The *model minority* stereotypes also suggest that Asian

Americans are successful in academic and economic venues and do not face any barriers in achieving successes in these areas (Lee et al., 2009). Additionally, the *model minority* stereotypes suggest that Asian Americans do not need any assistance in their academics. These stereotypes, however, are faulty and are detrimental to Asian Americans, especially students.

For Asian American students, the internalization of the *model minority* stereotypes can result in anxiety, depression, stress, and social isolation (Lorenzo, Frost & Reinherz, 2000). In addition, Asian Americans students have lower self-confidence and lower self-esteem as compared to their White counterparts (Lorenzo et al., 2000). Since Asian American students believe that they have to live up to the standards set by the *model minority* stereotype, they often feel that their efforts are not enough. This results in negative effects such as guilt and shame. In addition, the guilt and shame are felt even more heavily due to additional pressure from their family and parents. Moreover, due to the pervasiveness of the *model minority myth*, teachers from grade school to college have certain expectations of their Asian American students. Often, Asian Americans who have academic difficulties are often overlooked because they are not perceived as having problems. For example, as part of the Asian *model minority myth*, Asian American students are seen as being proficient and gifted in math and science. As such, when Asian American students encounter difficulties in math or science, they may not seek assistance due to embarrassment because of internalized stereotypes. In addition to embarrassment, they may also feel shame believing that they are not meeting the standards set by the *model minority myth* (Lee et al., 2009).

Gender Differences in Academic Expectations

According to Hall (2009), there are gender differences in the level of education attainment between Asian males and females, with males having a higher percentage of a bachelor or higher degrees. Asian American females are expected to obtain an education because that is reflective of their good family values. However, if they become too educated, then this may reduce their “female attributes” (Hall, 2009, p.196). More specifically, Asian American men may not wish to marry a more educated woman whose focus on her career may negate from her duties as a mother and wife at home. South Asian American women (Indian American, Pakistani American, etc.) also experience cultural conflicts related to their gender such as dating and marriage (Rahman & Witenstein, 2013). Similar to other Asian American women, South Asian American women are expected to be highly educated and have successful careers yet also preserve their cultural and family honor (Rahman & Witenstein, 2013). This leads to conflicts between personal, parental, and cultural expectations as well as increased levels of distress for South Asian American women. South Asian American males on the other hand, experience much more independence and favorable treatment by their parents as compared to their female counterpart (Rahman & Witenstein, 2013).

Asian American females are also more influenced in their career choices by their fathers than do Asian American males (Tang, 2000). This finding was echoed by Dundes, Cho, and Kwak (2009), who found that Asian American females were two times more likely to be influenced by their father when it comes to where they attend college and the type of graduate school as compared to Asian American males.

Additionally, Asian American females are urged by their parents to perform as well as or outperform their siblings by three times as compared to Asian American males (Dundes et al., 2009). This suggests that there may be a difference in how Asian American females experience academic expectations stress as compared to their Asian American male counterpart.

Nativity Status and Academic Expectations

According to Lowe (2009), many Asian immigrant families who have experienced great poverty in their native country utilize education as a means to advance on the social ladder and accumulate wealth. To them, this is the American dream that is attainable and based solely on effort. For less acculturated Asian students, the pursuit of careers in the field of medicine, engineering, and other stereotypical careers are more interesting to them and also act as a vehicle for greater self-efficacy as compared to more acculturated Asian peers (Castelino, 2004). Given that in Asian societies, the children are seen as an extension of their parents and of the family. Therefore, when the children do well and succeed academically and moves up the social ladder, the family, in essence, moves up with the children. This could be a reason why parents place great amount of pressure on their children to succeed in the academic realm.

First generation Asian American college students who are non-U.S. born are also more likely to adhere to Asian cultural values more strongly than later generations of Asian American college students (Kim & Omizo, 2005). Likewise, later generations of Asian American college students and students who are born in the United States will tend to adhere to the European American cultural values more strongly than first

generation or recently immigrated Asian American college students. As a result, later generation Asian American college students may not perceive as much academic expectations stress as their first generation or newly immigrated counterpart since they perceive more autonomy and individual freedom (Kim & Omizo, 2005; Sue & Zane, 1985). Another difference between non-U.S. born Asian American college students and their later generation counterparts is that non-U.S. born students spend more hours studying and choose their careers based on a non-reliance on English. Instead they focus on careers with more technical skills such as engineering, science, and mathematics which rely less on language (Sue & Zane, 1985).

Purpose of Study

The purpose of this study was to revalidate the Academic Expectations Stress Inventory (AESI) by Ang and Huan (2006). This inventory was developed with adolescents in Singapore, yet there have not been any studies conducted with Asian American college students. Moreover, no specific instrument exists to assess for academic expectations stress in Asian American undergraduate students, which is a gap that this study aimed to fill. Although Ang and Huan's study provided empirical support for this instrument, it is still unclear whether (1) the two-factor model of the AESI has good model fit for Asian American undergraduate college students, (2) if there is a gender difference for the levels of academic expectations stress experienced from others (parents/teachers) and self, and (3) if there is a nativity status difference in the levels of academic expectations stress experienced from others (parents/teachers) and self. As such, the study aimed to examine whether the AESI two-factor model was a good fit for

Asian American college students. Furthermore, this study aimed to look at measurement invariance of the AESI to evaluate whether this scale measured academic expectations stress the same for both male and female Asian American college students, such as, whether the scores have the same meaning and can be interpreted in the same way. However, measurement invariance requires equal sample size for both comparison groups and the current study had 68 Asian American females and 239 Asian American males. This made measurement invariance difficult. As such, the current study compared the means of Asian American females with Asian American male scores on both sources of stress to assess for differences. It was also hypothesized that Asian American females experience more academic expectations stress from their parents/teachers and themselves as compared to Asian American males. Due to an unequal size in Asian American students with different generation status, the students were divided into U.S. born and non-U.S. born to assess for differences in experience of academic stress. It was hypothesized the non-U.S. born Asian American college students have higher levels of academic expectations from parents/teachers and self as compared to U.S. born Asian American college students.

Research Questions

- 1) Does the original two factor model of the AESI proposed by Ang and Huan (2006) have good model fit with Asian American undergraduate students?
 - a. Hypothesis: The two factor model proposed by Ang and Huan will have good model fit with Asian American undergraduate students.

- 2) Is there a gender difference in the levels of academic expectations stress experienced from others (parents/teachers) and from self?
 - a. Hypothesis: Female Asian American undergraduate students will experience higher levels of academic expectations stress from others (parents/teachers) and from self as compared to male Asian American undergraduate students.
- 3) Is there a nativity status difference in the levels of academic expectations stress experienced from others (parents/teachers) and from self?
 - a. Hypothesis: Non-U.S. born Asian American undergraduate students will experience higher levels of academic expectations stress from others (parents/teachers) and from self as compared to U.S. born Asian American undergraduate students.

Methodology

Study Design

The current study initially recruited from a large research academic institution in a college town, in a southern state. The primary investigator (PI) of the study identified academic majors that have potentially large numbers of Asian American students. According to Yee, Su, Kim, and Yancura (2009), Asian American students are often compelled to choose culturally sanctioned fields such as medicine, science, or business as these fields are seen as the most economically viable and socially rewarding. As such, academic majors related to science, technology, mathematics, engineering, business, and humanities were identified as potential recruiting pool for this study. After the identification of which academic majors and fields the current study would recruit from, the PI utilized the course registration website at the institution to search for the

contact information of professors, lecturers, and graduate assistants teaching current undergraduate courses in each of the identified majors and fields. Then, the PI sent an IRB approved email with a brief description of the study and asked for the professors' assistance with data collection for the study. The professors were asked to forward another IRB approved brief email that was addressed to their students with a brief description of the study as well as the Qualtrics survey link to complete the survey. The students were informed that their participation was strictly voluntary.

The PI also researched the different types of Asian American student associations using the Student Activities website to identify the number of possible recruitment groups. The PI identified 17 potential cultural student organizations that were possible for recruitment. Afterward, the PI sent out an IRB approved email, addressed to the club president or contact personnel, that contained a brief introduction to the current study and the survey link that interested club members could access to complete the survey. The brief email requested the club presidents or contact personnel to forward the email to interested club members to complete the survey.

The PI also identified institutions with a large number of Asian American college students as potential recruitment institutions. Specifically, the university system of California was identified as potential recruiting institutions due to the large number of Asian American student enrollees. However, out of the ten campuses in the University of California Systems, only the University of California at Berkeley (UC Berkeley) granted the PI permission for recruitment. The PI researched UC Berkeley's registration website to find professors, lecturers, and graduate teaching assistants' contact

information. Then, the IRB approved email with information about the study and request for their assistance in recruitment was sent out. The PI also utilized UC Berkeley's student organization website and identified organizations and student clubs that were specifically related to Asian culture, activities, and group identification. Then the PI contacted the president or contact personnel of each of these groups via the IRB approved email to ask for assistance with recruitment. Unfortunately, the PI was not successful in recruiting from UC Berkeley due to a lack of replies from the identified contacts.

The PI actively recruited Asian American college students on a continuous basis over two semesters. Despite the time frame, there was a lack of response from Asian American college students, a population crucial to the research questions for this study. As such, the PI and PI's advisor decided that the best approach to recruit such a specific student population would be through a third party, uSamp, a research recruiting company. uSamp has different survey takers or "panels" that they utilize to help companies with academic and marketing research. After obtaining approval from IRB to utilize uSamp specifically for the recruitment of Asian American undergraduate college students, the current study was able to obtain an appropriate sample for analysis. Survey takers recruited by uSamp were compensated two U.S. dollars for completion of the survey.

The PI also recruited Asian American college students via Facebook. The PI posted an IRB-approved blurb with description of the study and the survey link to her Facebook page. Additionally, this blurb was also sent to other Asian Americans that the

PI knows and asked them to forward the blurb to anyone who meets criteria for inclusion in the study. This snowball method for recruitment was also a last effort attempt for recruitment of Asian American undergraduate students. (See Table 2 for demographic characteristics).

Participants

Data was collected on 307 Asian American college students (77.9% male; 22.1% female) residing in the United States. Participant's ages ranged from 18 to 35 years ($M = 24.37$ years; $SD = 5.19$ years). The two largest groups of identified Asian Americans in the study were Chinese American (31.9%) and Indian American (38.7%). The majority of participants were U.S. born (57.5%) and currently in their 4th year in college (40.1%). See Table 2 for full breakdown of demographic data.

Instruments

Academic Expectations Stress Inventory (AESI). This 9-item, five-point Likert scale ranging from 1 (Never true) to 5 (Almost always true), was created to assess for sources of academic expectations stress in middle and high school students (Ang & Huan, 2006). Sample questions include: *I feel stressed when I do not live up to my own standards* and *I feel stressed when I know my parents are disappointed in my exam grades*. Sources of expectations are broken into two categories: a) parents and teachers, and b) self. Initial validation of the inventory by Ang and Huan (2006) had a Cronbach's alpha of .89 and convergent results correlating high expectation of self and parental/teacher expectation scores with the Fear of Negative Evaluation Scale-Brief Version, which measures anxiety at being evaluated negatively. For the current study,

the Cronbach's alpha is .88 for the total scale score, .83 for Others score, and .78 for Self score. Confirmatory Factor Analysis for the AESI suggests good model fit regarding the two latent variables of expectations of self and expectations of parents and teachers (Ang & Huan, 2006). Test-retest reliability was also assessed and the results were found to be reliable estimates.

Kessler Psychological Distress Scale (K10). The K10, developed in 1992 by Kessler, is an inventory that assesses for depression and anxiety in individuals. The scale is a five-point Likert rating ranging from 1 (All of the time) to 5 (None of the time). Sample questions include: *In the past 30 days, how often did you feel tired out for no reason* and *In the past 30 days, how often did you feel depressed*. The scoring for this scale ranges from 10 to 50, with higher scores indicating lower levels of psychological distress. This scale was chosen to assess for anxiety and depression given its wide utility as well as psychometrics (Andrews & Slade, 2001). The items on the K10 correlate highly with DSM-IV criteria for major depression (MacKinnon, Jorm, & Hickie, 2004). This scale was utilized as an efficient scale in place of the Beck Anxiety Inventory and the Beck Depression Inventory-2. For the current study, Cronbach's alpha is .91.

Fear of Negative Evaluation Scale – Brief Version (FNE-B). This is an abbreviated scale that assesses for anxiety under the perception of being evaluated. The brief version is strongly correlated ($r=.96$) with the full 30 question version and has a Cronbach's alpha of .90 versus the full version's Cronbach's alpha of .93 (Leary, 1983). For the current study, Cronbach's alpha is .94. This scale is based on a five point Likert scale ranging from 1 (Not at all characteristic of me) to 5 (Entirely characteristic of me).

Sample questions include: *I worry about what other people will think of me even when I know it doesn't make any difference* and *I am afraid that other people will find fault with me*. Higher scores suggest greater degree of anxiety and apprehension at being negatively evaluated.

Inventory of College Students' Recent Life Experiences (ICSRLE). This is a four point Likert scale ranging from 1 (Not at all part of my life) to 4 (Very much part of my life), 49-item inventory that was developed in 1990 (Kohn, Lafreniere, & Gurevich, 1990). It assesses for college daily hassles that students may experience. The inventory asks the respondents to base their responses in the past month. High scores suggest greater daily hassles. Sample questions include: *Social rejection* and *loneliness*. For Kohn's initial study, Cronbach's alpha was .89. For the current study, Cronbach's alpha is .94.

Data Analysis and Results

SPSS version 21.0 and MPlus Version 6.1 were utilized for the analysis of the current study. Structural Equation Modeling (SEM) assumes multivariate normality (Kline, 2011) so the initial process of data analysis involved examining the data to identify potential outliers, first by looking at univariate normality. Univariate normality was assessed by converting all scale-scores to z-scores, with z-scores greater 3 were identified as potential outliers. Based on this standard, no univariate outliers were detected. Then, multivariate normality was assessed using Mahalanobis distance (Kline, 2011).

Mahalanobis distance was calculated for the combination of indicators in the analyses. Once Mahalanobis distance scores were computed, they were compared to the chi-square distribution with the number of variables as the degree of freedom. For this currently, the degree of freedom was 12 and the chi-square critical value was 21.03. Based on this critical value to compare with the Mahalanobis distance scores, no multivariate outliers were identified.

Lastly, analysis for kurtosis and skewness was explored for the current data. According to West, Finch, and Curran (1995), the existence of skewness is present when scores fall above 2.0, and 7.0 for kurtosis. Based on these standards, the current data are deemed normally distributed.

Model Fit Indices

To address the first research question, structural equation modeling (SEM) was utilized with the purpose of identifying if Ang and Huan's two factor model of the AESI (see Figure 1) is a good fit for the data in the current study. Good model fit indices of comparative fit index (CFI) $>.90$; root mean square error of approximation (RMSEA) $<.06$; and standardized root mean square residual (SRMR) $<.05$) as suggested by Kline (2011) and Hu and Bentler (1999) were utilized as criteria for whether the two factor model indicates good fit with the new samples of students. RMSEA as high as .08 is deemed as a reason fit (Hu and Bentler, 1999).

AESI Model Fit for Asian American College Students

Research Question 1: Does the original two factor model of the AESI proposed by Ang and Huan (2006) have good model fit with Asian American undergraduate students?

Hypothesis 1: The model proposed by Ang and Huan will have good model fit with Asian American undergraduate students.

Full Information Maximum Likelihood (FIML) method was utilized to estimate parameters of the two factor model of the AESI. Results from FIML analyses suggested that the model is a reasonable fit for the Asian American college students in the sample (N=307) with ($\chi^2 = 73.76$; $df=26$; RMSEA=0.08; CFI=0.95; and SRMR=0.05). This suggests that the data in the current sample is a good fit with the two factor original model of the AESI proposed by Ang and Huan (2006). Refer to Figure 2 for the model information. Additionally, this suggests that Ang and Huan's original model is generalizable to a different sample population that is different from the original population consisting of middle and high school Singapore students. In this case, the finding suggests that the two factor model could be utilized with Asian American college students living in the United States.

Convergent and Discriminant Validity

After assessing for model fit of the AESI via fit indices, convergent and divergent (discriminant) validity were assessed utilizing the Brief Fear of Negative Evaluation Scale, (FNE-B), the Kessler Psychological Distress Scale (K10), and the Inventory of College Students' Recent Life Experiences (ICSRLE). According to DeVillis (2003), convergent validity shows the evidence of correlations or relationships of similar constructs whereas divergent or discriminant validity shows the absence of correlation and relationship between two unrelated constructs. To demonstrate convergent validity for the AESI, the FNE-B scale and the ICSRLE inventory were

utilized. The K10 scale was utilized to demonstrate divergent or discriminant validity for the AESI.

Prior to convergent and discriminant validity analyses, it was determined that there were gender and traditional and non-traditional student status differences with the Asian American undergraduate students in the current data. Given these differences, gender and tradition and non-traditional student status were controlled for when convergent and divergent validity were analyzed.

The results indicated that there was a positive, bi-directional, statistically significant relationship between expectations of others (parents/teachers) ($r=.51, p<.01$) and expectations of self ($r=.52, p<.01$) with fear of negative evaluation. Additionally, there was positive, bi-directional, statistically significant relationship between the daily hassles of college students' recent life experiences score with expectations of others ($r=.42, p<.01$) and expectations of self ($r=.42, p<.01$). Results from the analysis showed that there was a negative, bi-directional, statistically significant relationship between psychological well-being and the expectations of others ($r= -.33, p<.01$) and expectations of self ($r= -.36, p<.01$). As a reminder, higher scores on the K10 suggest less psychological distress. Refer to Table 3 for correlations of the AESI and the preceded scales.

Gender Differences in Academic Expectations

Research Question 2: Is there a gender difference in the levels of academic expectations stress experienced from others (parents/teachers) and from self?

Hypothesis 2: Female Asian American undergraduate students will experience higher levels of academic expectations stress from others (parents/teachers) and from self as compared to male Asian American undergraduate students.

Univariate analysis was conducted to examine if Asian American female college students experience higher levels of academic expectations stress from others and from self as compared to Asian American male college students. Results indicate that Asian American female ($M=3.47$, $SD=.77$) college students do not differ from Asian American male ($M=3.25$, $SD=.87$) college students in the level of academic expectation stress from others (parents/teachers), $F(1, 300)=3.36$, $p=.068$. However, there is gender differences in academic expectations stress from self, $F(1, 304)=16.15$, $p<.001$. Asian American female college student ($M=3.98$, $SD=.66$) academic expectations stress from self is statistically significantly higher than their male ($M=3.56$, $SD=.78$) counterpart.

Nativity Status Differences and Academic Expectations

Research Question 3: Is there a nativity status difference (U.S. born versus non-U.S. born) in the levels of academic expectations stress experienced from others (parents/teachers) and from self?

Hypothesis 3: Non-U.S. born Asian American college students will experience higher levels of academic expectations stress from others (parents/teachers) and from self as compared to U.S. born Asian American college students.

Univariate analysis suggests that there were no differences in the levels of academic expectations stress experience from others between U.S. born Asian American college students ($M=3.33$, $SD=.83$) and non-U.S. born Asian American college students

($M=3.26$, $SD=.89$); $F(1, 298)=.45$, $p=.50$. There were also no differences in the levels of academic expectations stress experience from self between U.S. born Asian American college students ($M=3.67$, $SD=.74$) and non-U.S. born Asian American college students ($M=3.65$, $SD=.82$), $F(1, 302)=.06$, $p=.80$.

To further explore the results between gender and nativity status on sources of academic expectation stress from others and self, linear regression analysis was conducted to explore interaction effects. The findings suggest that there were not a statistically significant interaction effects of gender and nativity status on expectation stress from others ($b= -.36$, $S.E. = 1.20$, $\beta= -.04$, $p= .766$) and self ($b= -.12$, $S.E. = .85$, $\beta= -.02$, $p= .887$).

Discussion

The current study aimed to revalidate the Academic Expectations Stress Inventory created by Ang and Huan (2006) with Asian American undergraduate college students. Ang and Huan's two-factor model has good model fit with the sample of Asian American college students in the current study. This suggests that the Academic Expectations Stress Inventory could be utilized with Asian American college students. Furthermore, the results suggest that the nine items on the AESI are generalizable to Asian American college students' perception of sources of academic expectations stress. This is further supported by Tan and Yates (2011) study that found that the AESI could be utilized with students from Confucian Heritage Culture such as China, Taiwan, Singapore, Japan, and Korea to assess for academic stress. Additionally, the results from the current study are also congruent with the current literature on parental expectations

and internalization of those expectations by Asian American college students, which affects personal academic expectations (Gloria & Ho, 2003; Kim & Omizo, 2005; Rahman & Witenstein, 2013; D’Lima, Winsler & Kitsantas, 2014). To provide additional support of the use of the AESI with student populations outside of Singapore, Ang et al. (2009) validated the two factor model of the AESI with Canadian adolescents ranging from 14 to 19 years in age. Ang et al. (2009) found that although the model was acceptable for a Canadian sample, Singaporean students experienced higher levels of academic expectations stress from others and self when compared to their Canadian counterparts. The result from the current study has means that are similar to the levels of academic expectations stress experienced by the Singaporean sample, with total academic stress scores higher than the Canadian sample’s total score. See Table 4 for a comparison. This suggests that the Asian American sample in the current study may be more similar to the Singaporean sample on the overall level of academic expectations stress. However, differing from the Singaporean sample are the mean scores related to expectations of teachers, which the Canadian and Asian American samples scored lower on as compared to the Singaporean sample. Given that the hierarchy between teachers and students are not as emphasized in Canadian and American culture as compared to the relationship between teachers and students in Singapore, the Canadian and Asian American samples may not place a strong emphasis on impressing their teachers. Ang et al., 2009 suggested that the difference in the expectation stress scores between the Canadian and Singaporean samples may stem from the Asian students’ interdependent self-constructs and the socialization of sensitivity to significant others’ judgement and

expectations. As such, meeting expectations of significant figures such as parents and teachers may be deemed part of their fulfillment of filial piety (Ang et al., 2009).

Nonetheless, the total academic expectation stress score of the Asian American samples were higher than that of the Canadian sample and was closer to the overall score of the Singaporean sample. This suggests that although they may differ in age range and current culture, the level of academic expectations stress may be very similar.

The current study failed to assess for measurement invariance between male and female Asian American undergraduate students due to the unequal samples. However, univariate analysis was able to assess for differences in means between how Asian American female and Asian American male college students experience the levels of academic expectations stress and the sources of that stress. The results in the current study suggest that there were no gender differences between the two groups and the level of expectations stress from their parents and/or teachers. This finding is not congruent with current literature regarding female Asian American college students and parental expectations and parental influence in their education (Dundes, Cho, & Kwak, 2009; Rahman & Witenstein, 2013). Asian American females, especially females from South Asian cultures, which are collectivist, patriarchal, interdependent, and hierarchical with very strict gender roles, have been shown to experience bi-cultural conflicts due to the dual expectations. They are expected to obtain high educational achievements, yet also expected to uphold all the traditional expectations of their gender roles (Rahman & Witenstein, 2013). As such, Asian American females have to endure bi-cultural conflicts and expectations from their families, cultures, academic settings, as well as

themselves. Incongruent expectations from their familial culture and dominant culture may contribute to significant psychological distress. Asian American females from South Asian cultures also experience higher levels of conflict regarding sociocultural decisions, specifically conflicts related to their family expectations based on their gender roles (Rahman & Witenstein, 2013). Furthermore, the current study suggests that psychological distress is associated with higher levels of academic expectations stress from self and others as well as higher levels of anxiety under perception of negative evaluation or judgement. Current literature suggests that Asian American females' academic decisions are more heavily influenced by their parents, as compared to Asian Americans males (Dundes, Cho, & Kwak, 2009). The finding in the current study suggests that the degree of others' expectations stress may be the similar for both male and female Asian American college students.

Despite similar level of academic expectation stress perceived from others (parents and teachers) when compared with Asian American male students, Asian American females experience statistically significant higher level of academic expectation stress from themselves. This finding may be due to internalization of parental expectations in addition to the expectation to uphold traditional female roles in Asian culture, which could influence the level of academic expectations stress Asian American place on themselves (Hall, 2009; Rahman & Witenstein, 2013). Additionally, there may also be higher levels of academic expectation stress from themselves to perform well academically as a means to overcome the gender norms and roles placed on Asian cultural expectations. According to Uba (1994), Asian American males are

viewed as more valuable than females due to the son's ability to carry on the family line. This realization could be a contributing factor to excel academically and thus, higher of experiences of academic expectation stress from themselves. Furthermore, Hall (2009) noted that although Asian American females are expected to be educated so that they are seen as "wise" and "possessing good genes," it may be detrimental if they are "too educated" because this may "reduce their feminine attributes" (pg.196). Asian American females who wish to overcome such cultural messages may place more pressure on themselves to break out of this mold.

The current study also found that there are no differences in the level of academic expectations stress, from parents and/or teachers and self, between non-U.S. born and U.S. born Asian American undergraduate students. Although research has shown that later generations of American students tend to adhere to European cultural values as opposed to their Asian cultural values (Fugligni, Tseng & Lam, 1999; Goyette & Xie, 1999; Park, Kim, Chiang & Ju, 2010), findings in the current study suggest that both U.S. born and non-U.S. born Asian American college students share similar levels of academic expectation stress perceived from others and self. However, more research is still needed, specifically addressing academic expectations in U.S. and non-U.S. born Asian American students, taking into consideration acculturation and adherence to cultural values. The current study only compared U.S. and non-U.S. born Asian American college students without assessing for acculturation and adherence to cultural and traditional values. According to Goyette and Xie (1999), first generation (non-U.S. born) Asian American students had significantly higher educational expectations from

their parents as compared to third generation (U.S. born) Asian American students. Furthermore, the same study found that high parental educational expectations were the underlying contributing factor to the high level of educational expectations from Asian American students themselves. Without information about acculturation and adherence to cultural tradition and values, the findings in this current study regarding differences between U.S. and non-U.S. born Asian American students may prove to be meaningless. For example, Asian American students who are U.S. born, who may be second or third generation, may adhere strongly to many of the cultural academic expectations from their parents.

On the other hand, to understand how the U.S. and non-U.S. born Asian American college students levels of academic expectations stress may be similar in the current study, it is important to revisit the *model minority myth*. According to Lee, Wong, and Alvarez (2009), Asian American students are perceived as prodigies with high academic successes. This perception of Asian American students may reinforce internalization of these expectations. Lee, et al. (2009) also pointed out that school counselors, teachers, and peers often perceive Asian American students with the stereotypes associated with the *model minority myth* and expect them to fit these stereotypes. In addition to the pressure from teachers and peers, Asian American students also face parental pressures to perform academically (Gupta, Szymanski, & Leong, 2001; Lee et al., 2009; Yoo, Burrola, & Steger, 2010).

Besides the external pressures from parents, teachers, and peers, Asian American students also place considerable pressure on themselves to succeed and live up to the

stereotypes of the *model minority myth*. The pressure to succeed in turn can cause psychological distress such as depression, anxiety, and worry (Saw, Berenbaum, & Okazaki, 2013) when Asian American students feel that they are not living up to these standards (Lee, et al., 2009). High academic expectations stress from internalization of parental expectations as well as the *model minority myth* has shown to have great effects on psychological stress and self-efficacy of Asian American college students (Gloria & Ho, 2003; D’Lima, Winsler, & Kitsantas, 2014; Toupin & Son, 1991). The results from the study provide further evidence of the high academic expectations stress that Asian American college students, especially females, experience in their academic endeavors and the psychological toll that could result from the internalized academic expectations.

Implications

The current study has clinical and research implications for understanding Asian American undergraduate students and their academic expectations stress. The model could be utilized in counseling center as a tool to aid with case conceptualization of Asian American undergraduate students who may come to seek help for psychological distress. Additionally, this current study suggests that students who experience high levels of academic expectations stress are also likely to endorse symptoms of psychological distress related to anxiety and depression, a fear of negative evaluation, and are also likely to endorse daily hassles and stressors. As such, these different areas of interventions could be targeted to improve Asian American undergraduate students’ mental wellness.

Clinical Implications

The good model fit of the Academic Expectations Stress Inventory suggests that it could be utilized with Asian American undergraduate students for clinical practice, such as individual counseling and career counseling. Available literature suggests that Asian American college students underutilize mental health treatment available, such as the counseling center (Kim, J. E., Park, S. S., La, A., Chang, J., & Zane, N., 2015). Asian American students are more likely to seek assistance when they encounter academic difficulty, which is deemed a more acceptable area to receive help for as opposed to mental health problems which carry a stigma in Asian culture (Kim et al., 2015; Miville & Constantine, 2007). The application of the AESI scale in a clinical setting could identify the sources of academic stress for Asian American college students who may utilize counseling centers for their mental health needs. The nine items on the AESI could serve as a quick assessment related to severity or level of academic expectations stress experienced by Asian American college students.

The students' responses on each of the item could serve as a guide for the initial and subsequent sessions. Additionally, the scale could be utilized as a helpful tool to conceptualize the experiences of Asian American college students related to their academic expectations stress, perceived expectations of parents, perceived expectations of professors, and perceived expectations of self. Unrealistic and perfectionistic expectations of self could be identified and addressed with students to increase awareness to the relationship between these expectations and overall well-being related to symptoms of anxiety, depression, insomnia, and somatization.

The results from this study also provided information regarding the differences between the levels of academic expectations stress that Asian American female college students experience as coming from themselves as compared to Asian American male college students. Given that Asian American females experience significantly higher academic expectations stress from themselves could contribute to the conceptualization of Asian American female college students in a clinical setting. The awareness that Asian American female students may internalize parental and/or professors and cultural expectations related to academic successes may help guide treatment planning as well as aid the students in addressing some of the underlying concerns of their anxiety and stress.

Research Implications

Although the finding in the current study suggests that the AESI has good model fit with the current sample of Asian American college students, additional research is needed to build empirical support for the AESI due to the uniqueness of the current sample. The data for the current study was obtained via crowd sourcing and the demographic characteristics of the participants do not represent the typical undergraduate student, who would typically range from 18 years old to 25 years old. For this particular sample, the age range for the participants ranged from 18 years old to 35 years old, with the mean age being 24 years old. Additionally, the current study also has significantly fewer females than males. Future research could utilize a more even sample of Asian American males and females.

As a result of the unequal samples of males and females in the study, analysis of measurement invariance was not conducted. Future research could explore measurement invariance of the AESI in Asian American female students and their male counterparts. Given the complexity of cultural norms and expectations for Asian American females, future research could couple the AESI with other instruments that assess for adherence to cultural gender norms to further understand academic expectations stress in Asian American female college students. Additionally, the same study could assess for cultural gender norms adherence in male Asian American college students and the levels of academic expectations stress experienced.

Moreover, additional research is needed to further understand how nativity status impacts levels of academic expectations stress, taking into consideration levels of acculturation and enculturation, adherence to cultural values and traditions (Park, Y. S., Kim, B. S. K., Chiang, J., & Ju, C., 2010), duration of residency in the United States, and proximity to one's own ethnic group (Duan, C., & Paul, V., 2000). Given that the level of acculturation can influence Asian American students' career choices and career goals in addition to having less conflict with parents regarding education or career options (Kim, B. S. K., 2009), it would be an important component to include in future research regarding academic expectations stress.

Lastly future research could also compare how first and second generation Asian American college students differ in the levels of academic expectations stress as well as the sources of stress as compared to third and fourth generation Asian American college students, taking into consideration the mentioned factors.

Limitations

There were many limitations to the current study that should be addressed. Given the difficulty with recruiting Asian American undergraduate students, a third party company was utilized to help with recruitment. This resulted in a less than ideal sample due to the non-traditional characteristics of the survey takers. Specifically, they were older, non-traditional Asian American undergraduate students who completed the surveys, who may not be representative of the true sample group that the current study wanted to recruit.

Another limitation to the study was the small sample size of Asian American female undergraduate students, thus limiting certain analyses such as measurement invariance of the AESI between Asian American male and female students. Given the different gender roles and expectations that females and males have in Asian culture, measurement invariance would explore if the sources of expectations are perceived the same way in male and female Asian American undergraduate students.

An additional limitation to the study is the number of U.S. born and non-U.S. born Asian American undergraduate students. Given that the majorities of the participants were first (non-U.S. born) and second generation (U.S. born) students, the study was unable to address generation differences with third or fourth generation students. This limitation in the generation status of the participants suggests that additional research is needed to fully understand how generational differences affect the level of academic expectations stress in Asian American undergraduate students.

Another limitation of the study was the failure to include measures related to acculturation and enculturation levels and adherence to cultural values and beliefs. The addition of these measures to would have increased the breadth of the findings related to academic expectations stress experienced by Asian American college students.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Summary

The purpose of this dissertation was to explore and understand perceived academic competition among Asian American college students and their Asian American peers as well as revalidate the Academic Expectations Stress Inventory by Ang and Huan (2006) using the proposed two factor model. This was a two manuscript journal article formatted dissertation.

The first manuscript utilized two focus groups to explore and understand perceived academic competition among Asian American college students and their Asian American peers using social comparison theory (Blanton, 2011; Suls & Wheeler, 2000). Eight themes emerged after the data were transcribed and analyzed.

The second manuscript revalidated the Academic Expectations Stress Inventory using the two factor model proposed by Ang and Huan (2006) with Asian American college students. The sample for the current study demonstrated good model for the proposed model.

Conclusions

The purpose of the revalidation study of the Academic Expectations Stress Inventory stemmed from the themes of academic pressure and internalization of parental expectations by Asian American college students to be academically successful, which emerged from the focus groups in manuscript one. The two factor model and the Academic Expectations Stress Inventory created by Ang and Huan (2006) have good

model fit for the current sample of Asian American college students. Additionally, the study found that Asian American female college students experience higher levels of academic expectations stress from themselves more than from their parents and/or teachers as compared to male Asian American students. There were no differences in the levels of academic expectation stress from self and teachers and/or parents between U.S. and non-U.S. born Asian American college students.

Some limitations in the study include: participants were compensated to take the survey, with many being older or nontraditional Asian American college students, which may not be a good representative of traditional Asian American college students; small sample of Asian American female college students in the sample as compared to a larger sample of male Asian American college students; and limited representation of third or fourth generation of Asian American undergraduate students and the majority of the participants were first and second generation. Other limitations include the exclusion of measures related to levels of acculturation and enculturation, as well measures related to adherence to cultural beliefs and values.

Some implications of the study include: utilization of the AESI with college students in a clinical or career counseling setting to identify sources of academic expectation stress as well as assess for levels of stress with Asian American college students; provide further research support for female Asian American college students and the level of academic expectations that they place on themselves; provide empirical for two sources of academic expectations stress that greatly influence Asian American college students' psychological well-being.

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APPENDIX A: ACADEMIC EXPECTATIONS STRESS INVENTORY¹

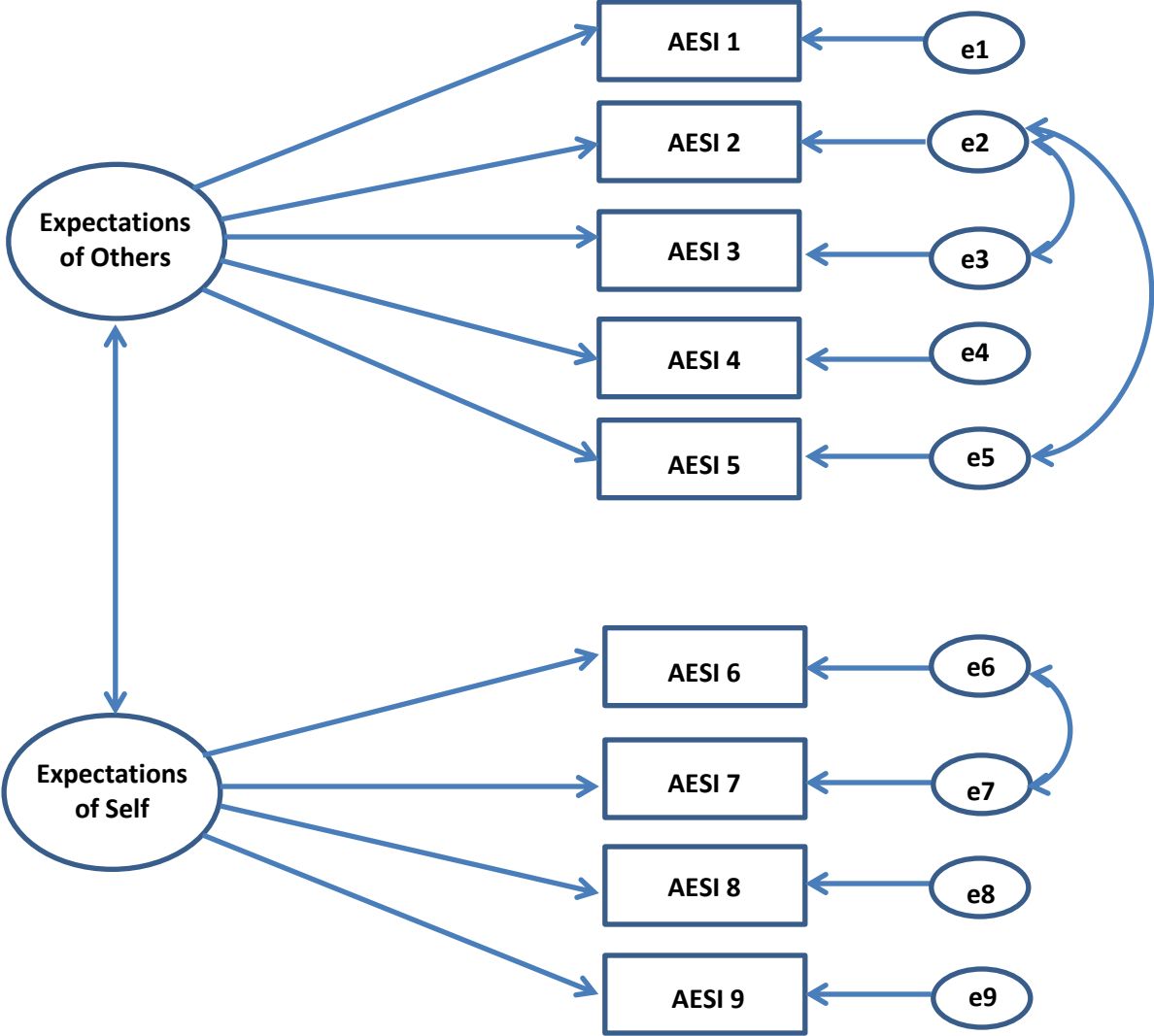
There are no right or wrong answers. Read each statement carefully and decide how well it describes you using the following scale. Circle the number that best describes you.

1	2	3	4	5
Never True	Seldom True	Sometimes True	Often True	Almost Always True

- | | | | | | |
|---|---|---|---|---|---|
| 1. I feel stressed when I do not live up to my own standards. | 1 | 2 | 3 | 4 | 5 |
| 2. When I fail to live up to my own expectations, I feel I am not good enough. | 1 | 2 | 3 | 4 | 5 |
| 3. I usually cannot sleep and worry when I cannot meet the goals I set for myself. | 1 | 2 | 3 | 4 | 5 |
| 4. I blame myself when I cannot live up to my parents' expectations of me. | 1 | 2 | 3 | 4 | 5 |
| 5. I feel I have disappointed my teacher when I do badly in school. | 1 | 2 | 3 | 4 | 5 |
| 6. I feel I have disappointed my parents when I do poorly in school. | 1 | 2 | 3 | 4 | 5 |
| 7. I feel stressed when I know my parents are disappointed in my exam grades. | 1 | 2 | 3 | 4 | 5 |
| 8. When I do not do as well as I could have in an examination or test, I feel stressed. | 1 | 2 | 3 | 4 | 5 |
| 9. I feel lousy when I cannot live up to my teacher's expectations. | 1 | 2 | 3 | 4 | 5 |

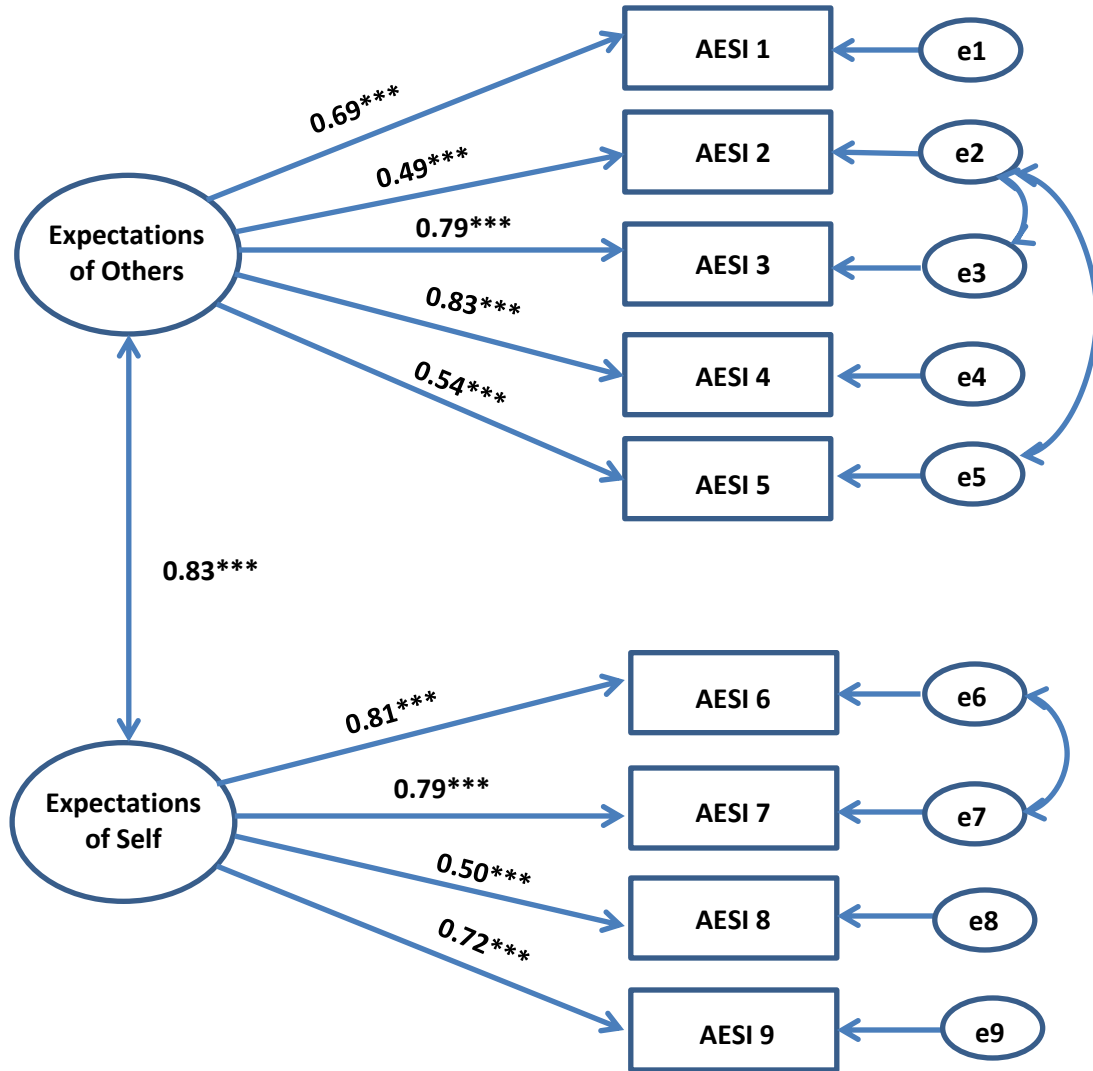
¹ *Reprinted with permission from “Academic expectations stress inventory: Development, factor analysis, reliability, and validity” by Ang, R. P., & Huan, V. S., 2006. *Educational and Psychological Measurement*, 66, 522-539, Copyright 2006 by Sage Publications.

Figure 1. Model of Academic Expectations Stress Inventory ²



² *Reprinted from *Child Psychiatry and Human Development*, 38, 2007, 73-87, Factorial structure and invariance of the academic expectations stress inventory across Hispanic and Chinese adolescent Samples, Ang, R. P., Huan, V. S., & Braman, O. R, Figure 1, with kind permission from Springer Science and Business Media.

Figure 2. Model of Academic Expectations Stress Inventory with Asian American College Students³



Note. ***= $p < .001$; Standardized estimate are presented.

³ *Reprinted from *Child Psychiatry and Human Development*, 38, 2007, 73-87, Factorial structure and invariance of the academic expectations stress inventory across Hispanic and Chinese adolescent Samples, Ang, R. P., Huan, V. S., & Braman, O. R., Figure 1, with kind permission from Springer Science and Business Media.

Table 1. Demographic Information for Focus Groups

	N	Mean Age	Avg. Time in U.S. (all)
Sex			
Male	5	20.4	7.67 years
Female	6	21.0	
Ethnicity			
Chinese American	3		
Japanese American	1		
Vietnamese American	7		
College Status			
1 st Year	1		
2 nd Year	1		
3 rd Year	3		
4 th Year	5		
Graduate	1		
U.S. Born			
Yes	8		
No	3		

Table 2. Demographic Characteristics of Asian American Students

	N (307)	%
Sex		
Male	239	77.85
Female	68	22.15
Identified Asian Group		
"Asian"	15	4.92
Chinese American	95	31.15
Filipino American	24	7.87
Indian American	88	28.85
Japanese American	19	6.23
Korean American	22	7.21
Laotian American	4	1.31
Pakistani American	2	0.66
Taiwanese American	1	0.33
Vietnamese American	35	11.48
College Status		
1 st Year	69	22.92
2 nd Year	51	16.94
3 rd Year	58	19.30
4 th Year	123	40.86
U.S. Born		
Yes	176	57.52
No	130	42.48
Parents U.S. Born		
Yes	46	15.03
No	260	84.97
Grandparents U.S. Born		
Yes	25	8.20
No	280	91.80
Peer Group Make Up		
Mostly all Asian American students	86	28.01
Mixed group of Asian Am. students and other minority students	94	30.62
Mostly students of other ethnic and minority groups	70	22.80
Mostly Caucasian/European students	53	17.26
Mostly African American Students	4	1.30

Table 3. Correlations Between Scores from Others and Self

Scale	Mean	SD	1	2	3	4	5
1. OTHERS	3.30	0.85					
2. SELF	3.66	0.78	0.69**	—			
3. FNE	25.71	7.54	0.51**	0.52**	—		
4. K10	35.20	7.70	-0.33**	-0.36**	-0.44**	—	
5. ICSRLE	101.05	25.60	0.42**	0.42**	0.53**	-0.59**	—

Note: Others suggest parents/teachers as sources of academic expectations stress

FNE = Brief Fear of Negative Evaluation Scale; K10 = Kessler Psychological Distress Scale; ICSRLE = Inventory of College Students' Recent Life Experiences

**= $p < .01$

Table 4. Item Means on the AESI with Canadian, Singaporean, and Asian American Samples⁴

Items on AESI	Mean: Canadian Sample	Mean: Singaporean Sample	Mean: Asian American Sample
1. I blame myself when I cannot live up to my parents' expectations of me.	2.99	3.59	3.29
2. I feel I have disappointed my teacher when I do badly in school.	2.83	3.37	2.94
3. I feel I have disappointed my parents when I do poorly in school.	3.59	3.93	3.57
4. I feel stressed when I know my parents are disappointed in my exam grades.	3.53	3.77	3.56
5. I feel lousy when I cannot live up to my teacher's expectations.	2.81	3.34	3.14
6. I feel stressed when I do not live up to my own standards.	3.89	3.90	3.90
7. When I fail to live up to my expectations, I feel that I am not good enough.	3.23	3.80	3.73
8. I usually cannot sleep and worry when I cannot meet the goals I set for myself.	3.01	3.10	3.19
9. When I do not do as well as I could have in an examination or test, I feel stressed.	3.83	3.81	3.82
TOTAL	29.69	32.38	31.13

Note: Means of Canadian and Singaporean samples are derived from Ang et al. (2009) revalidation study.

⁴ Reprinted from *Journal of Adolescence*, 2009, 32(5), 1225-1237, Cross-cultural invariance of the academic expectations stress inventory: Adolescent samples from Canada and Singapore, Ang, R. P., Klassen, R. M., Chong, W. H., Huan, V. S., Wong, I. Y. F., Yeo, L. S., & Krawchuk, L. L., Table 1 with permission from Elsevier, <http://www.sciencedirect.com/science/journal/01401971/32/5>.