

Asian College Students:
How do Families Influence Young Adults' Financial Socialization?

A THESIS
SUBMITTED TO THE FACULTY OF THE
UNIVERSITY OF MINNESOTA
BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF ARTS

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June 2017

Acknowledgements

Without the encouragement and support from many others, this thesis would not have gone so far. It is my pleasure to acknowledge those who have supported me and my work over the past two years in graduate school.

First, I would like to thank my advisors: Dr. Virginia Zuiker and Dr. Tai Mendenhall for their patient guidance and thoughtful advice. It is through their help that I have been able to go one step further in my professional career. I truly appreciate Dr. Zuiker's expertise about finances, and Dr. Mendenhall's kind advice regarding the implications of my research findings. They not only help me in academia; they also support me in professionalism and life.

Second, I am deeply grateful to my committee member, Dr. Teresa Swartz, for her expertise and guidance in Asian culture(s). She offered me great help and inspiration about my overall research directions.

Third, I would like to thank Dr. Catherine Montalto from The Ohio State University for allowing us to use 2014 *National Student Financial Wellness Study* dataset. This work would not have been possible without her support for letting me access the dataset.

I want to thank my faculty members and graduate student cohort in the Department of Family Social Science who supported, encouraged, and helped me through this journey.

Finally, I would like to thank my parents, Qiang and Xiaohong, and my close friends Siwen and Xiang, for their love, support, and encouragement. Without them, I would not have enjoyed this experience.

Abstract

Paying for college can be stressful. For Asian Americans, both students and parents work to figure this out. International Asian students enter the country with their parents' financial support already-established, but struggle to navigate complex economic policies relevant to them. Using family financial socialization theory (Gudmunson & Danes, 2011) as a guide, this study explored how families influence Asian students' financial attitudes, knowledge, and behaviors. It is the first study to examine a large sample of Asians living in the United States by different citizenship statuses (n=671). Results show that financial socialization is positively associated with financial behaviors for all Asian college students. Implications for financial professionals who work with Asian students and their parents are described in conclusion.

Key words: Asian college students; family financial socialization; financial attitudes; financial behaviors; financial knowledge

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Finances represent an ever-growing concern in the United States for families with college students. With higher education, too, comes a normative transition for families wherein parents and children begin to develop more adult/adult relationships with each other. As college-aged children work to develop their own autonomy and independence, parents work to loosen their control and authority (Lee & Liu, 2001; Lui, 2015; Nelson, Bahrassa, Syed, & Lee, 2015). During this time, making autonomous decisions (including those that demonstrate financial independence) is important for children; it confirms that they are growing up (Shim, Barber, Card, Xiao, & Serido, 2010). Making financial decisions about how to finance college, however, is oftentimes difficult for everyone involved. Conflicts and stress about this can ultimately have negative effects on students' mental health and academic performance (Lee, Su, & Yoshida, 2005).

How much does College Cost?

The College Board (2016) recently conducted an investigation regarding what the average full-time college student can expect to pay (including tuition, room, board, etc.) in his or her pursuit of a bachelor's degree. For those enrolled at a public four-year school, expenses totaled \$18,931 per year (\$75,724 by graduation); for students who choose a private nonprofit four-year institution, these costs total \$42,445 per year (\$169,780 by graduation). Moving beyond these averages, it is well known that college tuition varies considerably across institutions. For example, Columbia University (in New York City) costs \$68,300 (including tuition, room and board) per academic year for both in-state and out-of-state students (\$273,200 by graduation) (Columbia University, 2016). At the University of Minnesota-Twin Cities, tuition for out-of-state students is \$31,524 (2015-2016) per academic year

(\$126,096 by graduation); for in-state students, it is \$23,104 (\$92,416 by graduation) (University of Minnesota, 2016).

Contemporary Diversity in College Life

Students attending college have become increasingly diverse over the last several years, echoing the increasingly diverse racial and ethnic nature of the United States itself. Students who enrolled with REM (racial and ethnic minority) designations increased from 15% in 1976 to more than one-third (33%) in 2010 (U.S. Department of Education, 2012). Asians have increased faster than any other racial/ethnic group on college campuses (U.S. Department of Education, 2010).

Contemporary diversity in Asian Americans. Asian Americans are defined as people who were born in the United States, or those who migrated here when they were younger than 12 years-old. Older immigrants (e.g., parents and grandparents) tend to want to retain multiple aspects of their traditional culture (e.g., food, family structures, filial piety, financial practices), whereas children often want to integrate aspects of both conventional Eastern and modern Western cultures (Lee et al., 2005; Lee & Liu, 2001; Sluzki, 1979; Szapocznik & Kurtines, 1993). Conflicts between parents and children about this are especially common during adolescence and young-adult years; common areas of discord include younger generations' choices in clothing, dating, marriage, career paths, family planning, and the provision of elder support (Arnett, 1999; Laursen, Coy, & Collins, 1998; Lee et al., 2005). As Asian American children are admitted into college, these conflicts with their immigrant parents can escalate significantly – resulting, too, in increased levels of social and mental health problems like depression and domestic violence (Furuto & Murase, 1992; Greenberger & Chen, 1996; Lau, Jernewall, Zane, & Meyers, 2002; Lee, 2000; Lee, Choe, Kim, & Ngo, 2000; Su, Lee & Vang, 2005; Tran et al., 2015; Uba, 2003).

Education is a major concern for many Asian families. Research has shown that Asian Americans – as a group – have the highest educational achievement among all minorities. Chen (2012) reported that Asian Americans comprise up to 18% of the student populations at Ivy League schools; this is larger than their respective share of the Nation's population (Thomas, Mao, & Mao, 2016; Chen, 2012).

It is important, however, to recognize that these data do not fully represent the diversity within the Asian American population, itself. Research has found that some Asian American subgroups (e.g., Burmese, Cambodian, Hmong, Laotian, Thai, Vietnamese) do not tend to show high academic achievement in comparison to Chinese, South Korean, and Japanese students (Chen, 2012; Sohn, Joo, Grable, Lee, & Kim, 2012; Thomas et al., 2016). A principal reason to explain this difference is that less-educated Asian American sub-groups tend to have originated from contexts wherein daily life was more oriented to subsistence farming. Higher education (e.g., a college degree) is not useful or adaptive within these circumstances. Further, unlike Asians from China and Japan who immigrated to the United States with the explicit purpose of achieving higher education, other subgroups came here as refugees fleeing war, genocide, and/or political turmoil. Their arrival to United States was one that was against their will, and many aspects of their culture (including values regarding and/or participation in education at any level) are in marked contrast with mainstream Western and Chinese/Japanese Asian American worldviews (Hune, 2002; Thomas et al., 2016). Much of the research that has been published on this topic has focused on Asian American college students who are primarily from Chinese and Japanese backgrounds. These two Asian groups are typically families who maintain high values on education, and are comparatively "Westernized" vis-a-

vis other Asian American subgroups (Sue & Okazaki, 1990; 2009). Although this study did not identify different subgroups within Asian populations, the disparities among Asians still needs to be examined in future research.

Purpose of Current Investigation

Asian Americans represent the largest minority presence in United States colleges and universities today (Thomas et al., 2016). They represent young adults who are highly invested in pursuing their education. At the same time, they are balancing demands from their families-of-origin, who can work for- or against- their success. Understanding money can be one of the most stressful components of this journey; it is thereby important to understand how these students make financial decisions on their own (or with parents). A paucity of literature is available to inform these processes. The purpose of this study is to begin filling this gap in knowledge by exploring how Asian college students financially behave in their own right.

Drawing from a nationally representative sample, the researcher explored the manners in which families influence Asian college students' financial attitudes, knowledge, and behaviors. She also compared the financial wellness of these students by their citizenship status (i.e., Asian American college students versus International Asians). Knowledge gained from this effort will inform college counselors, financial advisors, educators, and clinicians who work with Asian students and their parents.

Review of Literature

Financial Attitudes, Knowledge, and Behaviors

Financial attitudes and knowledge have been highly associated with financial behaviors (Hayhoe, Leach, & Turner, 1999; Lai, 2010). Therefore, knowing how students behave financially is an area of study for researchers to investigate so that

they can better understand college students' financial attitudes and knowledge. Credit card use is one of the predictors to reflect college students' financial situation. Because it is relatively easy and convenient for college students to apply for credit cards, they are more likely to view credit and debt with favorable attitudes (Hayhoe et al, 1999; Lai, 2010). For example, Lai's (2010) research on Taiwanese college students (n=906) found that college students who have "emotional/affective money attitudes" are more likely to exhibit impulsive buying behaviors (i.e., less deliberate and more arousing, unintended, and irresistible compared to planned buying behavior), whereas those who have "cognitive credit attitudes" are less likely to spend money this way (p. 377).

Financial knowledge is also important in shaping college students' financial behaviors as rational consumers. Researchers have found, however, that most college students maintain poor financial knowledge nowadays (Norvilitis et al., 2006). Warwick and Mansfield (2000) reported that in a sample of 381 college students, only a few of them could state the current interest rates on their credit cards. Students without debt evaluated their financial management skills as superior to those who have debt (Lea, Webley, & Walker, 1995; Norvilitis et al., 2006), but they underestimate the length of time to repay debt (Lewis & van Venrooij, 1995; Norvilitis et al., 2006; Seaward & Kemp, 2000). Students who overestimate their future incomes are also more likely to be in debt than those who under-estimate (Norvilitis et al., 2006; Seaward & Kemp, 2000). Therefore, there is evidence to show that college students are lacking in financial knowledge, and that this lack of knowledge can have an impact on their financial behaviors.

Financial behaviors, as outcomes for financial management, are influenced by financial attitudes and financial knowledge. Although nowadays students have

more access to attain financial education (e.g., high school and college), they are still financially unstable. This means that they are more likely to engage in risky behaviors like overspending, not making or following a budget, going into credit card debt, and failing to maintain savings (Shim et al., 2010). Therefore, to better understand the financial behavior of college students, it is important for financial professionals to identify the factors that shape the college students' financial attitudes and knowledge so that they are better prepared to work with this population. Although researchers are examining college students' financial attitudes, knowledge, and the influences these have on their financial behavior, research is lacking when it comes to specifically examining the Asian college student population.

Financial Stress

Financial stress is defined as the inability to meet one's financial demands, causing negative psychological or emotional outcomes (Northern, O'Brien, & Goetz, 2010). This type of stress is very common among college students (Heckman, Lim, Montalto, 2014; Northern et al., 2010; Ross, Niebling, & Heckert, 1999). In Trombitas's (2012) report, four of the top five stressors reported by college students are related to finances. Heckman et al. (2014) found that 71% of college students sampled reported that they felt financial pressures. Moreover, financial stress can trigger problems related to health issues like depression, anxiety, and poor physical well-being (Andrews & Wilding, 2004; Clark-Lempers, Lempers, & Netusil, 1990; Harding, 2011; Heckman et al., 2014). Therefore, these scholars suggested that college students' financial stress has become one of the most visible and harmful factors impacting students' academic performance, alongside physical and psychological health.

Financial Socialization

Research has shown that the social structures and economic environments that they inhabit influences how these young adults will behave with their finances. As advanced by financial socialization theory (Danes, 1994), individuals' future financial behaviors are influenced by their financial knowledge and beliefs (Kim, Kim, & Moon, 2016). For example, college students are likely to rely on their parents for emotional and financial support (Fingerman, Miller, Birditt, & Zarit, 2009; Financial Industry Regulatory Authority Investor Education Foundation, 2013; Settersten, 2012), and they intend to live at home longer than they have in the past (Pew Research Center, 2012; Serido et al., 2015; U.S. Census Bureau, 2010). Because college students tend to stay with their parents longer nowadays, one might expect that these children will have had more opportunities to observe their parents' financial habits. The ways that parents financially behave can influence how their adult children understand finances, thereby impacting how they spend and/or save their own money (Serido et al., 2015).

Guiding Theoretical Framework

Family Financial Socialization introduces the development of financial “values, attitudes, standards, norms, knowledge, and behaviors that contribute to financial viability and individual well-being” (Danes, 1994, p.128; Payne, Yorgason, & Dew, 2014) (see Figure 1). It explains how communication helps individuals understand financial issues and how things work and operate within financial systems (Gudmunson & Danes, 2011; Moschis, Moore, & Smith, 1984). This theory predicts financial socialization outcomes (e.g., financial attitudes, knowledge, capabilities, financial behaviors, and financial well-being) through family socialization processes (including personal and family characteristics, family interactions and relationships, and purposive financial socialization). Further

research has found that the diversity of *Family Financial Socialization Theory* can be generalized across different ages, races, ethnicities, etc. (Hancock, Jorgensen, & Swanson, 2013; Payne et al., 2014; Sohn et al., 2012). For instance, Payne et al. (2014) found evidence that *Family Financial Socialization Theory* can help inform understanding about how married couples plan for retirement. Sohn et al. (2012) showed that this theory could be applied to South Korean youth in understanding the relationships between their financial socialization agents, experiences, financial attitudes, demographic characteristics, and financial literacy.

In the context of this theory, the researcher is interested in how Asian college students with their personal and/or family demographic characteristics learn about finances (e.g., financial attitudes, financial knowledge, and behaviors) from both family members (e.g., parents, siblings) and via family interactions that represent purposive socialization about money. The following sub-sections outline key elements of this theory:

Personal and family demographic characteristics. Personal demographic characteristics include individual-level variables like gender and age. Family demographic characteristics include variables like household size and socioeconomic status (Gudmunson & Danes, 2011). These variables have shown to be strong predictors of a variety of financial outcomes like number of credit cards, amount of personal debt, and financial knowledge about retirement planning (Draut & Silva, 2004; Hancock et al., 2013; Joo & Grable, 2004; Shim, Xiao, Barber, & Lyons, 2009).

Family interactions and relationships. Interaction patterns among family members also influence the development of financial attitudes, knowledge, and capability. Gudmunson and Danes (2011) have shown how the manners in which

spouses, parents/children, and siblings – alongside those in larger contexts like schools, community organizations, and the workplace – serve as arenas in which we learn about money. Children learn what their parents model to them through everyday life (e.g., paying the mortgage, buying groceries, managing credit cards) and when faced with financial challenges (e.g., job loss, housing crisis). They learn through friends and colleagues about whether and how social status is ascribed to particular brands of clothing, cars, and other possessions. As they grow up, children's ways of perceiving and handling money evolve accordingly (Danes & Yang, 2014).

Financial attitudes, knowledge, and capabilities. Financial attitudes, knowledge, and capabilities (i.e., intermediary financial socialization outcomes) correlate with financial behaviors and financial well-being. Furthermore, these foci interact in different ways. For example, confident financial attitudes towards one's financial ability bolster financial knowledge, which in turn shapes behaviors (Bandura, 1977, 1997; Gudmunson & Danes, 2011). Gudmunson and Danes (2011) discuss that, although students are under different circumstances by nature of being in college, they carry with them these same characteristics.

Financial behavior and financial well-being. Financial outcomes can be divided into two categories: financial behaviors and financial well-being. Financial behavior includes two constructs: One of the financial behaviors is more likely to refer to observable financial outcomes (e.g., earning, saving, spending, gifting). The other financial behavior is correlated to “financial turning point and decision making,” which includes “initiation and termination of passive financial processes,” e.g., 401k account (Gudmunson & Danes, 2011, p. 650).

Financial well-being is well-established based on financial behavior, including objective (e.g., income and saving levels) and subjective (e.g., financial satisfaction, low economic pressure) indicators (Gudmunson & Danes, 2011).

Research Questions/Hypotheses

Little research has focused on the financial socialization, stress, and financial behaviors of Asian populations, especially among Asian college students. Hence, this study explored the financial socialization and stress variables of the financial behaviors of this group. Asian American college students and International Asian college students were tested separately. The guiding research questions for this study were as follows:

RQ1. *What are the differences in financial attitudes and financial knowledge between Asian American college students and International Asian college students?*

H1.1. Asian American college students are more confident in their financial attitudes than International Asian college students.

H1.2. Asian American college student are more knowledgeable about finances than International Asian college students.

RQ2. *How do early financial experiences in families (e.g., role modeling, direct teaching) influence Asian college students' financial behaviors?*

H2.1. Early optimistic financial experiences in families (e.g., encouragement to open a bank account and/or invest money) will have positive influences on Asian college students' financial behaviors than on International Asian college students.

H2.2. Asian American college students will have earlier financial experiences in families than International Asian college students.

RQ3. *How do financial socialization and financial stress associate with financial behaviors when controlling for family demographic variables (i.e., parental education, parental annual income)?*

H3. High financial socialization and low financial stress are positively associated with rational financial behaviors when controlling for family demographic variables.

Method

Data

Data were collected from the 2014 *National Student Financial Wellness Study* (NSFWS, 2014), which is managed by The Ohio State University. It surveyed the financial attitudes, practices, and knowledge of college students across several institutions of higher education in the United States. Fifty-two (52) academic institutions – including four-year public colleges / universities (n = 32, 61.5% of all institutions), four-year private colleges / universities (n = 12, 23.1% of all institutions), and two-year public colleges (n = 8, 15.3% of all institutions) – were included (The Ohio State University / Office of Student Life, 2016). The present research is a separate part of this larger study; it was approved by the University of Minnesota's Institutional Review Board (IRB).

Respondents

Respondents were sent an email invitation from an administrator representing the institution they were attending. After formally consenting, students completed a survey through an online platform. The total sample included 18,792 undergraduates; collectively they represent a total response rate of 11.5%. From this dataset, 4.3% (n = 815) of the respondents self-identified their race/ethnicity as Asian American/

Asian (including East, South, and Southeast; Middle Eastern and Arab American groups were not included).

To be included in this study, the following criteria were employed.

Respondents self-identified their race/ethnicity as Asian American / Asian (including East, South, and Southeast backgrounds) and were a traditional college-age student (18-23 years old). Additionally, this study was also interested in examining Asian college students by their citizenship status. Respondents were required to answer if they were “Natural born U.S. citizen”, “Naturalized U.S. citizen”, or “Permanent Resident U.S.” – meaning they were classified as “domestic” or U.S. college students. Respondents who indicated that they were a “citizen of country other than U.S.” were classified as “international” college students. These two citizenship criteria resulted in: (1) “domestic or U.S. college student” (i.e., 73.3% Asian American college students, $n = 492$) and (2) “International” (i.e., 26.7% International Asian college students, $n = 179$). The final sample, then, included 671 Asian college students.

Dependent Variable

Personal financial management behaviors. To better understand college students’ financial management behaviors, students were asked 13 questions about their financial behaviors. To select these items, the researcher conducted an exploratory factor analysis (EFA; see details in Appendix A) to measure the factor structure that emerged from the data. The researcher began by following procedures used in the larger study to determine college students’ financial wellness (The Ohio State University / Office of Student Life, 2016). Thirty-three (33) questions were selected from the survey; these questions were chosen because they (1) measure

psychological status, which correlated with financial wellness, and (2) were designed as binary, ordinal, or continuous in scale.

The Keiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.927) and Bartlett's test of Sphericity ($p < .0001$) showed that the Asian population sample was appropriate (KMO is close to 1, Bartlett's test of Sphericity is statistically significant) for analysis using EFA (Howell, 2012; Leech, Barrett, & Morgan, 2005). The researcher applied EFA via principal axis factoring and a promax rotation, meaning that all of the selected items were correlated. Items were eliminated from the final factor solution because they showed low communalities ($< .30$). In addition, variable loadings of factors need to be larger than 0.50 (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Reliability was measured by applying Cronbach's alpha; results showed high reliability ($\alpha > 0.89$).

Hence, the final items used for the present study included 22 questions (of the 33 items originally selected) that related to college students' financial wellness. All three factors (i.e., personal financial management behaviors, family financial socialization, and financial stress) met the criteria for communalities greater than 0.30 and variable loadings greater than 0.5; see Table 1 and Appendix A. For each of these factors, a regression model score was calculated and used in the analysis.

Independent Variables

Parents' characteristics. Parental characteristics included parents' education levels and annual income (see Table 2). Education degrees of parents/guardian(s) were recoded into dummy coded variable where 0 = Mother (father)/guardian(s) did not complete college and 1 = Mother (father)/guardian(s) completed college or higher.

Students' characteristics. Students' characteristics included age, gender, years enrolled in college, and employment status (see Table 2). Gender was recoded where 0 = female and 1 = male. Employment status was recoded where 0 = Not employed and 1 = Full/part-time employed.

Financial situation. Financial situation included financial stress and family financial socialization. Financial stress represents whether a person can fulfill his or her financial demands and survey questions correlating to financial stress were generated from the EFA analysis. Respondents either agreed or disagreed to six statements relating to their financial stress levels (see Table 2). The following financial stress questions were reverse coded so that all statements were measured in the same direction. These reverse coded statements included: "When I think about my financial situation, I am optimistic about the future," "After graduation, I will be able to support myself financially," "I think that the cost of college or university is a good investment for my financial future."

Parents are one of the most important sources of financial information for their children. To measure family financial socialization, survey questions correlating to family financial socialization were generated from the EFA analysis. These variables were based on parent-child communications about finances (see Table 2).

Financial Knowledge. To better understand Asian college students' financial knowledge, respondents were asked four knowledge questions (see Table 2). A financial knowledge score was calculated. These questions tested their knowledge about interest rates, repaying students loans, taxes, and credit scores.

Financial experiences. To determine financial experience, the researcher included precollege financial experiences of Asian college students, and also if they

consulted with any financial professionals (e.g., financial aid counselor, peer counselor, or tax advisor; see Table 2).

Descriptive characteristics. To better understand the Asian college student and who they are, the respondents were asked additional questions. Respondents' citizenship status, age, years enrolled in college, GPA, where they lived, who they lived with, native language (and if they spoke another language), and whether they had a student loan were assessed.

Analysis Procedures

The purpose of this research was to compare differences of Asian college students by their citizenship status, and to explore the influence(s) of parents and students characteristics along with financial socialization and stress variables on the financial behaviors of Asian college students. To answer research questions 1 and 2, Chi-square and t-test were utilized (Howell, 2012; Leech et al., 2005). To answer research question 3, a hierarchical regression was used to examine parents and students characteristics along with financial situation variable on personal financial management behaviors. In the hierarchical regression equation, parents' characteristics variables were entered first, then students' characteristics followed by financial situation (Howell, 2012; Leech et al., 2005).

Analysis for Hypothesis 1. The researcher used a *t*-test to measure H1.1: Asian American college students are more confident in their financial attitudes than International Asian college students; and H1.2: Asian American college students are more knowledgeable about finances than International Asian college students. By using *t*-test, the researcher compared group differences (i.e., Asian American college students versus International Asian college students) on their financial knowledge scores and financial stress levels.

Analysis for Hypothesis 2. The researcher used a chi-square test to measure H2.1: Early optimistic financial experiences in families (e.g., encouragement to open a bank account and/or invest money) will have positive influences on Asian college students' financial behaviors than International Asian college students; and H2.2: Asian American college students will have earlier financial experiences in families than International Asian college students.

Analysis for Hypothesis 3. First, a correlation matrix was employed to examine whether the effects of parents' characteristics, students' characteristics, and financial situation were correlated with personal financial management behaviors. The correlation matrix showed that there were no variables correlated above the $r = .40$ level. Next, a hierarchical regression was used to test H3: High financial socialization and low financial stress are positively associated with rational financial behaviors when controlling for family demographic variables.

First, parents' characteristic variables were entered into model 1, next students' characteristic variables were entered into model 2, followed by financial situation variables in the third model. Coefficients from the third model are described by the corresponding *F-statistics*. In order for the research hypothesis to be supported, one examines the change in the R^2 , since a change in indicates that for each set of variables (i.e., each model, total = 3) that these contribute to the financial management behaviors.

In order to examine whether the two hierarchical regression analyses (i.e., Asian American college students and International Asian college students) were actually different from each other, a Chow test was employed. This test examines whether the coefficients of the two regression models were the same across both groups, meaning there is no difference in financial management behaviors between

Asian American college students and International Asian college students (Chow, 1960).

Results

A total of 671 Asian college students were included in the sample, which consisted of 492 Asian American college students and 179 International Asian college students. Asian American college students were reported to be statistically younger ($M = 19.94$, $SD = 1.43$) than International Asian college students ($M = 20.66$, $SD = 1.56$). Moreover, both Asian American and International Asians indicated similarities on years enrolled ($M = 2.50$, $SD = 1.21$; $M = 2.66$, $SD = 1.22$ respectively) and GPA ($M = 3.33$, $SD = .57$; $M = 3.38$, $SD = .47$ respectively).

Regarding current living status, approximately 71% of Asian college students stated they lived with “roommates,” about 10% reported they lived with “parents,” and roughly 8% claimed that they lived “alone.” In addition, International Asians identified higher percentage on living with “roommate” (77.65%) and “alone” (12.29%) than Asian Americans (68.84% and 6.72%, respectively). Furthermore, Asian Americans claimed higher percentage in living with “parent” (12.83%) than International Asians (2.79%).

This sample of Asian college students also reported their native language preference. Approximately 32% of Asian American college students claimed English was their first language, compared to 2.79% International Asians. More specifically, about 33% of all Asian college students reported that they learned both English and another language “at the same time” (41.46% of Asian Americans versus 12.85% of International Asians).

Regarding financial aid, students were required to report whether they have or have they ever had a student loan to pay for college. Thirty-seven percent ($n =$

248) of Asian college students claimed that they have used student loans to pay for college, including 235 Asian American college students and 13 International Asian college students. About 60% of Asian students reported that they do not have student loans, including 241 Asian American and 156 International Asian college students (see Table 3 for further information).

Research Question 1: Financial Attitudes/Stress and Financial Knowledge

T-tests were used to measure differences between both Asian college student groups regarding their financial attitudes/stress. Results supported hypothesis 1 which showed that there is a significant difference in the financial attitudes for Asian American college students ($M = 2.43$, $SD = .58$) and International Asian college students ($M = 2.34$, $SD = .50$; $t(657) = 1.84$, $p = .021$).

To better understand financial knowledge, college students were asked to answer four-questions relating to finances. Results suggest that Asian college students have statistically significant differences in their financial knowledge: Asian American college students ($M = 2.87$, $SD = 1.39$) scored higher in their financial knowledge than International Asian college students ($M = 2.47$, $SD = 1.22$), $t(655) = 3.33$, $p < .001$ (see Table 4 for further information).

Research Question 2: Financial Experiences

A Chi-square test was used to measure the differences in financial experiences between Asian American college students and International Asian college students. Findings partially supported hypothesis 2, meaning that Asian American college students have better financial experiences on certain aspects (e.g., precollege financial experiences) than International Asians. Regarding precollege experiences, results showed that Asian American college students are significantly different with these financial experiences: "Did you ever receive an allowance as a

child (age 12 or younger)?" ($\chi^2 = 11.23, p < .001$), "Did you ever receive an allowance as a teenager (age 13 or older)?" ($\chi^2 = 17.59, p < .001$), and "Did you work for pay while in high school?" ($\chi^2 = 41.12, p < .001$). Table 5 also maintains that there are statistically significant differences in "Did your parents or guardians encourage you to invest your money?" ($\chi^2 = 4.86, p < .05$) and "Did you attend personal finance classes/ workshops while in high school?" ($\chi^2 = 7.11, p < .05$). Work for pay while in high school, parents or guardians encouraging participants to save money, and attending personal finance classes / workshops while in college were not statistically significant.

To better understand financial experiences, whether Asian college students consulted with financial agents is helpful. Results show that Asian American college students are more likely to meet financial consultants than International Asian college students, such as a financial aid counselor ($\chi^2 = 46.35, p < .001$), financial advisor ($\chi^2 = 20.68, p < .001$), credit counselor ($\chi^2 = 10.84, p < .05$), investment advisor ($\chi^2 = 9.60, p < .05$), attorney ($\chi^2 = 8.47, p < .05$), insurance agent ($\chi^2 = 38.68, p < .001$), tax advisor ($\chi^2 = 8.31, p < .05$) and/or banker ($\chi^2 = 21.15, p < .001$). In response to the question if one had met with a peer counselor, there was no significant difference between Asian American and International Asian college students (see Table 5 for further information).

Research Questions 3: Financial Socialization and Financial Stress

Financial behaviors of Asian college students were influenced by multifaceted factors (e.g., financial socialization, financial stress). Hierarchical regression results indicated that there were statistical significances between financial situation (i.e., financial stress and financial socialization) and personal financial management behaviors, which supported hypothesis 3. More specifically,

Asian American college students and International Asian college students reported significant differences on parents' annual income and family financial socialization.

Tables 6 and 7 show the detailed information of study's hierarchical regression results. Table 6 reported the scale correlations and average scores of the dependent variable and the independent variables, and Table 7 indicated the determinants of financial behaviors for Asian American college students and International Asian students. Findings reported that a three-step hierarchical multiple regression was applied in this research to measure whether parents' (e.g., education level, income) and students' characteristics (e.g., age, gender, years enrolled) could predict financial management behaviors. First, parents' characteristics were measured; $F(3, 431) = .202, p = .895$. Second, students' characteristics variables were added into model 2; $F(8, 426) = .322, p = .958$. The last stage added the financial situation variables (i.e., financial stress and financial socialization), which contributed to a significant difference in financial behaviors; $F(10, 424) = 7.026, p < .0001$. More specifically, financial stress was negatively associated with financial behaviors ($\beta = -.123, p < .05$), and financial socialization was positively related to financial behaviors ($\beta = .391, p < .0001$); see Table 7 or more information.

Subsequently, in order to determine the interactions on each independent variables between Asian American college students and International Asian college students, a Chow test was used. Interaction among Asian college students would be analyzed only if the relationship between the dependent variable (i.e., personal financial management behaviors) and the independent variables (i.e., parents' characteristics, students' characteristics and financial situation) was not the same between two Asian groups of students (i.e., the result of Chow test has to be significantly different). According to *F-statistics*, the result of the Chow test was

statistically significant; $F(10, 651) = 3.32, p < .001$. This means that the coefficients of the regression model were not equal, indicating that there was a significant difference in financial behaviors between Asian American college students and International Asian college students. Therefore, comparing the differences between the two groups of Asian students by analyzing two separate regression models was necessary. Table 7 shows more information about specific variables that predicted financial behaviors.

For both Asian American college students and International Asian college students, financial socialization coefficients are statistically different. Further, results show that financial socialization is positively associated with financial behaviors in Asian American college students ($\beta = .496, p < .001$). Also, for International Asian college students, there is a statistically significant difference in their financial behaviors ($\beta = .297, p < .05$; see Tables 6 and 7).

Discussion

This study examined a large data set of Asian college students; it is the first of its kind to focus exclusively on this population. The investigation's purpose was to begin filling a gap in extant knowledge about how Asian college students financially behave. Results suggest that Asian American college students have many differences in their financial behaviors compared to International Asian college students, especially relating to financial stress, financial knowledge, financial experiences, and financial socialization.

Findings suggest that Asian American college students are more stressed about money compared to International Asian college students. According to previous literature, the socio-economic statuses of Asian American students and International Asian college students are different. All international students must

complete a form called “I-20: Certificate of Eligibility for Nonimmigrant Status,” which requires financial evidence confirming that students’ family or guardian(s) can afford tuition and living expenses during the study aboard period (Farrell, 2015). Because International Asian students are required to document established financial support before beginning their studies, it is not hard to understand why they may have less financial stress (i.e., more confident in financial attitudes) than Asian American college students who need to finance themselves.

International Asian college students may have more financial experiences before they went to college than Asian American college students; if so, this would partially counter hypothesis 2. Findings showed that International Asian college students are more likely to have allowances when they were a child or teenager, and they were engaging in work experiences before college more often than Asian American college students. Similarly, the parents of International Asian college students were more likely to encourage their children to invest money before they went to college than did Asian American college student’s parents. With the continued development of our industrialized world, money’s importance is increasing for (and within) Asian cultures. For example, while those in Asian cultures still emphasize the value of savings sans debt or loans – compared with those residing in American cultures – making strategic long-term investments has risen as even more important (Masuo, Malrouu, Hanashiro, & Kim, 2004). Thus, International Asian students’ parents may be sharing their money values with their children more, so that they might learn different ways to manage finances en route to better financial outcomes of their own (Masuo et al., 2004).

In a nutshell, International Asian college students report more financial experiences than Asian American college students – across both precollege

experiences and in meeting financial consultants. This explains, too, why International Asian parents might be willing to provide more financial resources and/or better financial environments. Although Asian American college students have better financial education from school, such as financial classes, International Asian college students have more access to establish their own fruitful financial experiences. International Asians and their parents value finances. More importantly, parents create an environment to discuss finances with their children. In addition, parents offer opportunities to their children about getting access to various financial professions. This aligns with *Family Financial Socialization Theory*, which explains that because parents (1) typically live with children in close proximity, and (2) they offer and control economic and material resources to support children as they grow up and develop – parents represent a primary source of financial socialization to young people.

According to previous literature, Asian American students and International Asian college students are different in their socio-economic status. For example, during 2016-2017, an International undergraduate student at Rice University would be required to provide documentation of at least \$63,017 on-hand to prove capability of covering college costs (International Student Financial Statement, 2016). This confirms that most International Asian college students are coming from either middle class or wealthy families. Asian American college students, in contrast, are often independent in terms of finances (e.g., paying tuition and living expenses themselves and/or with the assistance of student loans) (Sue, & Okazaki, 2009). It is understandable, then, that International Asians may have more opportunities to get

access to financial resources, and International parents are able to provide better financial environment than Asian American parents.

Research findings highlight the importance of financial socialization, and how this influences financial behaviors, which supported hypothesis 3. Asian American parents appear more likely to reach out to their children and feel comfortable talking about money management as compared to International Asian parents. Asian American parents may be more concerned about their children's college tuition and expenses; this could be why the topic of money comes up earlier in their families. Therefore, the results of financial socialization, explained by family financial socialization theory, show significant impact on the personal financial behaviors on Asian American college students.

Moreover, International Asian college students lived far away from their families, including parents or siblings. Therefore, it is hard for International Asians to financially socialize with their parents. Compared to International Asians, Asian American college students live closer to their families and it is more convenient for them to connect with their family members. Hence, that could be a reason to interpret why family financial socialization has less influence on International Asian college students than their Asian American counterparts.

Limitations

Although this current study makes a contribution regarding the importance of family financial socialization in Asian populations, results should be interpreted with caution. First, this investigation focused on Asian college students, but it did not clarify which countries they originally came from. Because of the diversity in educational values that are held by different Asian groups, results cannot be broadly generalized. For example, East Asian countries such as China, Japan, and South

Korea represent families who conventionally maintain high values on education – and that are comparatively “Westernized” vis-à-vis other Asian subgroups (e.g., Burmese, Hmong, Thai, Vietnamese). Without knowing specific origins and the small numbers typically represented on college campuses of each subgroup, it is hard for researchers to identify how cultural backgrounds influence college students who were included in this study. In future studies, researchers should identify the origins of respondents so that they are able to ascertain differences between and/or similarities across diverse Asian groups.

Second, this research only utilized students’ reports as data. Future studies should include both parents and students, and/or other family- or significant- others as informants. By doing this, researchers could tap various insights into socialization processes and have better understandings of mechanisms among different informants. Further, parental modeling can have both positive and/or negative influences on children. By identifying said impacts as positive or negative, researchers could clarify the mechanisms underlying interactions between parents and children that lead to different results.

Conclusion

Financial professionals who work with Asian college students (including Asian American college students and International Asian college students) must consider thoroughly how to offer financial education and services in multiple ways so as to match the different financial backgrounds that said students represent. These efforts could include formal education to increase financial knowledge (e.g., courses), alongside opportunities for personal coaching and advice (e.g., financial aid counselors). Attention to differences between the two groups of Asian students are important to consider, too. For Asian American college students, financial counselors

might need to focus more on foci targeting student loan debt and managing credit cards; for International Asian college students, indicated foci may target how to legally / appropriately manage money (e.g., fill out tax documents). Such efforts hold great potential in better equipping these young adults to be purposeful and effective in the ways that they handle and negotiate the often-stressful challenges of money.

Table 1. *Factor loadings and communalities based on a principal axis factoring analysis with promax rotation with Kaiser Normalization for 22 items from the short version of the Study on Collegiate Financial Wellness (SCFW) (n = 671)*

Variables	Financial Management Behaviors	Financial Stress	Family Financial Socialization
I have a weekly or monthly budget that I follow.	0.83		
I track my spending in order to stay within my budget.	0.99		
I track all debit card transactions/checks to balance my account.	0.74		
I pay my bills on time every month.	0.82		
I add to my savings on a regular basis.	0.81		
I rely on family members for financial advice.	0.77		
I rely on friends for financial advice.	0.91		
I am confident that I can manage my finances.	0.89		
I manage my money well.	0.76		
I have enough money to participate in most of the same activities as my peers do.	0.89		
I have enough money to participate in most activities that I enjoy.	0.81		
I regularly spend more money than I have by using credit or borrowing.	0.89		
In the past three months, I purchased something expensive that I wanted, but did not need.	0.82		
I feel stressed about my personal finances in general.		0.98	
I worry about being able to pay my current monthly expenses.		0.85	
I worry about having enough money to pay for school.		0.88	
When I think about my financial situation, I am optimistic about the future.		0.85	
After graduation, I will be able to support myself financially.		0.80	
I think that the cost of college or university is a good investment for my financial future.		0.80	

My parents or guardians were comfortable talking about money with me.	0.85
My parents or guardians told me what I needed to know about money management.	0.76
My parents or guardians were role models of sound financial management.	0.96

Reliability (α)	0.97	0.94	0.89
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Note. Item descriptions can be found in Appendix A.

Table 2: Description of Dependent variable and Independent variables

Variables	Description of Variable
Dependent Variable	
<i>Personal financial management behaviors</i>	A regression score was calculated from the EFA for each of the respondents
I have a weekly or monthly budget that I follow.	
I track my spending in order to stay within my budget.	
I track all debit card transactions/checks to balance my account.	
I pay my bills on time every month.	
I add to my savings on a regular basis.	
I rely on family members for financial advice.	
I rely on friends for financial advice.	
I am confident that I can manage my finances.	
I manage my money well.	
I have enough money to participate in most of the same activities as my peers do.	
I have enough money to participate in most activities that I enjoy.	
I regularly spend more money than I have by using credit or borrowing.	
In the past three months, I purchased something expensive that I wanted, but did not need.	
Independent Variables	
<i>Parents Characteristics</i>	
What is the highest level of education your father/guardian 2 has obtained?	0 = Mother (father)/guardian(s) did not complete college 1 = Mother (father)/guardian(s) completed college or higher

What is the highest level of education your mother/
guardian 1 has obtained?

What is your parent(s)/ guardian(s) current annual
income?

- 1 = Less than \$15,000
- 2 = \$15,000-\$29,999
- 3 = \$30,000-\$39,999
- 4 = \$40,000-\$59,999
- 5 = \$60,000-\$79,999
- 6 = \$80,000-\$99,999
- 7 = \$100,000-\$149,999
- 8 = \$150,000-\$199,999
- 9 = \$200,000 or higher

Students Characteristics

Age

Continuous variable

Gender

- 1 = Male
- 2 = Female

How many years have you been enrolled in post-
secondary or higher education (not counting any post-
secondary work completed in high school)?

- 1 = one year
- 2 = two year
- 3 = three year
- 4 = four year
- 5 = five or more

What is your employment status during the academic
year?

- 0 = Not employed

1 = Employed full-time/part-time

Financial Situation

Financial Stress

I feel stressed about my personal finances in general.
I worry about being able to pay my current monthly expenses.

I worry about having enough money to pay for school.
When I think about my financial situation, I am optimistic about the future.

After graduation, I will be able to support myself financially.

I think that the cost of college or university is a good investment for my financial future.

A regression score was calculated from the EFA for each of the respondents

Financial Socialization

My parents or guardians were comfortable talking about money with me.

My parents or guardians told me what I needed to know about money management.

My parents or guardians were role models of sound financial management.

A regression score was calculated from the EFA for each of the respondents

Financial Experience

Did you ever receive an allowance as a child (age 12 or younger)?

Did you ever receive an allowance as a teenager (age 13 or older)?

Did you work for pay while in high school?

1 = No
2 = Yes

Did your parents or guardians encourage you to save money?

Did your parents or guardians encourage you to open a bank account?

Did your parents or guardians encourage you to invest your money?

Did you attend personal finance classes/ workshops while in high school?

Have you attended personal finance classes/ workshops while in college/ university?

1 = No

2 = Yes, one-time event(s)

3 = Yes, term long course(s) or repeated sessions

Concerning my finances, I have met with a/an

Financial aid counselor

Financial advisor

Peer counselor

Credit counselor

Investment advisor

Attorney

Insurance agent

Tax advisor

Banker

1 = Never

2 = High school only

3 = College only

4 = High school and college

Financial Knowledge

- Imagine that the interest rate on your savings account is 1% per year and inflation is 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?
- 1=More than today
2=Exactly the same as today
3=Less than today
4=Don't know
- Suppose you have \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much would you have in the account if you left the money to grow?
- 1=More than \$102
2=Exactly \$102
3=Less than \$102
4=Don't know
- Suppose you borrowed \$5,000 to help cover college expenses for the coming year. You can choose to repay this loan over 10 years, 20 years, or 30 years. Which of these repayment options will cost you the least amount of money over the length of the repayment period?
- 1=10-year repayment option
2=20-year repayment option
3=30-year repayment option
4=Don't know
- All paycheck stubs show your gross pay (the total amount you earned before any taxes were taken out for the pay period) and your net pay (the amount of your check after all taxes). The taxes that are commonly taken out include federal, state and local income tax, Social Security tax, and Medicare tax. On average, what percentage of your income would you expect to receive as take-home pay?
- 1=100%
2=90-99%
3=80-89%
4=70-79%
5=Don't know

Which of the following make up the
 TWO largest components of a credit
 score? (Amounts owed, New credit,
 Types of credit used, Length of credit
 history, Payment history, Don't
 know)

1 = Selected
 0 = Did not select

Demographic Characteristics

Age	Numeric Value
Years enrolled	1 = 1
How many years have you been enrolled in post-secondary or higher education (not counting any post-secondary work completed in high school)?	2 = 2 3 = 3 4 = 4 5 = 5 or more
GPA	Numeric Value
Currently live	1 = On-campus in residence halls or college/university owned apartment or housing 2 = On-campus in sorority or fraternity housing (e.g., floor within resident hall, college/university-owned apartment or housing) 3 = Off-campus in sorority or fraternity house or residence 4 = Residence within walking distance of campus (e.g., apartment or house not owned by university)
Live with Who do you currently live with?	1 = Alone 2 = Roommates

	3 = Parent(s) or guardian(s)
	4 = Spouse or partner
	5 = My child or children
	6 = Other family members
	7 = More than one of the above
Native language	1 = Yes
Is English your native language (the first language you learned to speak as a child)?	2 = No
Student loan	3 = I learned both English and another language at the same time
Do you now have or have you ever had a student loan to pay for your college?	1 = Yes
	2 = No
	3 = Don't know

Table 3. Descriptive statistics for Asian American college students and International Asian college students

Variable	Asian American College Students (N=492)		International Asian College Students (N=179)		Test Statistic for Differences between Samples (N=671)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Age	19.94	1.43	20.66	1.56	$t = -5.37^{***}$
Years enrolled	2.50	1.21	2.66	1.22	$t = -1.514$
GPA	3.33	.57	3.38	.47	$t = -1.01$
	Number (%)		Number (%)		Total (%)
Where do you currently live?					$X^2 = .34$
On-campus in residence halls or college/university owned apartment or housing	161 (33.06%)		68 (37.99%)		229 (34.38%)
On-campus in sorority or fraternity housing (e.g., floor within residence hall	5 (1.03%)		2 (1.12%)		7 (1.05%)
Off-campus in sorority or fraternity house or residence	35 (7.19%)		19 (10.61%)		54 (8.11%)
Residence within walking distance of campus (e.g., apartment or house not owned	161 (33.06%)		50 (27.93%)		211 (31.68%)
Residence outside of walking distance of campus (e.g., apartment or house not owe	125 (25.67%)		40 (22.35)		165 (24.77%)
Total	487 (73.12%)		179 (26.88%)		666 (100%)
Who do you currently live with?					$X^2 = 31.42^{***}$
Alone	33 (6.72%)		22 (12.29%)		55 (8.21%)
Roommate	338 (68.84%)		139 (77.65%)		477 (71.19%)
Parent	63 (12.83%)		5 (2.79%)		68 (10.15%)
Spouse/partner	5 (1.02%)		3 (1.68%)		8 (1.19%)

Child	0 (0.00%)	2 (1.12%)	2 (0.3%)
Other family members	15 (3.05%)	1 (0.56%)	16 (2.388%)
More than one of the above	37 (7.54%)	7 (3.91%)	44 (6.57%)
Total	491 (73.28%)	179 (26.72%)	670 (100%)
Native language (English)			$X^2 = 183.41^{***}$
Yes	158 (32.11%)	5 (2.79%)	163 (24.29%)
No	130 (26.42%)	151 (84.36%)	281 (41.88%)
I learned both English and another language at the same time	204 (41.46%)	23 (12.85%)	227 (33.83%)
Total	492 (73.32%)	179 (26.68%)	671 (100%)
Students loan			
Do you now have or have you ever had a student loan to pay for your college?			$X^2 = 91.92^{***}$
Yes	235 (94.8%)	13 (5.2%)	248 (37%)
No	241 (60.7%)	156 (39.3%)	397 (59.3%)
Don't know	16 (64%)	9 (36%)	25 (3.7%)
Total	492 (73.4%)	178 (26.6%)	670 (100%)

$N = 671$; * $p < .05$, ** $p < .01$, *** $p < .001$

Table 4. *Differences on Financial Stress and Financial Knowledge between Asian College Students*

	Asian American college students		International Asian college students		<i>df</i>	<i>t</i>	<i>p</i>	<i>Cohen's d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Financial knowledge	2.87	1.39	2.47	1.22	655	3.33***	.001	0.31
Financial stress	2.43	.58	2.34	.50	657	1.84*	.021	1.22

N = 671; **p* < .05, ***p* < .01, ****p* < .001

Table 5. *Financial experience of Asian American college students and International Asian college students*

Variable	Asian American College Students		International Asian College Students		$X^2(1)$
	n	%	n	%	
Financial experience					
Precollege allowance child	154	.31	81	.45	11.23***
Precollege allowance teen	188	.38	101	.56	17.59***
Precollege work	234	.48	36	.20	41.12***
Precollege save	446	.91	159	.89	0.49
Precollege bank account	428	.87	148	.83	2.01
Precollege invest	189	.39	86	.48	4.86*
Finance class high school					7.11*
One-time events	91	.19	24	.14	
Long courses or repeated sessions	39	.08	6	.03	
Finance class college					2.65
One-time events	84	.17	33	.19	
Long courses or repeated sessions	29	.06	16	.09	
Financial Consultant					
Financial aid counselor					46.35***
High school only	49	.10	9	.05	
College only	105	.22	7	.04	
High school and college	36	.07	5	.03	
Financial advisor					20.68***
High school only	48	.10	8	.05	
College only	85	.18	15	.08	
High school and college	24	.05	3	.02	

Peer counselor					7.60
High school only	44	.09	7	.04	
College only	37	.08	10	.06	
High school and college	26	.05	6	.03	
Credit counselor					10.84*
High school only	17	.04	10	.06	
College only	12	.03	13	.07	
High school and college	4	.01	3	.02	
Investment advisor					9.60*
High school only	8	.02	10	.06	
College only	19	.04	11	.06	
High school and college	5	.01	2	.01	
Attorney					8.47*
High school only	5	.01	4	.02	
College only	8	.02	8	.05	
High school and college	1	.00	2	.01	
Insurance agent					38.68***
High school only	15	.03	10	.06	
College only	13	.03	24	.14	
High school and college	4	.01	6	.03	
Tax advisor					8.31*
High school only	8	.02	7	.04	
College only	20	.04	14	.08	
High school and college	9	.02	1	.01	
Banker					21.15***
High school only	53	.11	17	.10	
College only	56	.12	46	.26	
High school and college	45	.09	10	.06	

$N = 671$; * $p < .05$, ** $p < .01$, *** $p < .001$

Table 6. Scale Correlations and Average Scores (Total sample size, $N = 671$)

Variable	<i>M (SD)</i>	1	2	3	4	5	6	7	8	9	10
Financial management behaviors	-.01 (1.08)	-.027	-.033	.020	.048	-.026	-.010	.000	-.015	-.010	.344***
Predictor variable											
1. Education_father	.54 (.50)	-									
2. Education_mother	.49 (.50)	.616***	-								
3. Annuaincome_parent	4.23 (5.53)	.120**	.133**	-							
4. Citizenship	1.23 (.42)	.077	.110*	-.040	-						
5. Age	20.11 (1.48)	-.079	-.075	-.003	.218***	-					
6. Gender	1.66 (.50)	-.067	-.058	-.015	-.093*	-.070	-				
7. Years enrolled	2.08 (6.99)	-.068	-.012	-.004	-.035	.187***	-.047	-			
8. Employment Status	.52 (.50)	-.084*	-.098*	-.024	-.087*	.200***	.147***	.040	-		
9. Financial Stress	-.03 (1.23)	.036	.038	-.012	-.005	.073	-.009	.068	.065	-	
10. Financial Socialization	-.01 (1.02)	-.015	-.074	-.024	-.061	.045	-.035	-.001	.088*	.302	-

Note. $N = 671$; * $p < .05$, ** $p < .01$, *** $p < .001$

Item descriptions can be found in Appendix A.

Table 7. *Determinants of financial behaviors for Asian American college students and International Asian students (Model 3)*

Variable	Asian American College Students				International Asian College Students			
	<i>B</i>	<i>SE</i>	β	<i>Change in R²</i>	<i>B</i>	<i>SE</i>	β	<i>Change in R²</i>
Parents Characteristics								
Education_father	-.179	.150	-.073		-.019	.024	-.100	
Education_mother	.058	.150	.024		-.018	.025	-.097	
Annuaincome_parent	.002	.010	.010	.002	-.003	.004	-.073	.068
Students Characteristics								
Age	-.025	.045	-.028		.002	.006	.037	
Gender	.001	.119	.001		-.026	.018	-.141	
Years enrolled	.002	.011	.011		.001	.001	.136	
Employment Status	-.106	.127	-.043	.003	.017	.018	.090	.069
Financial Situation								
Financial Stress	-.036	.049	-.035		-.005	.011	-.066	
Financial Socialization♣	.751	.074	.496***	.240***	.018	.009	.297*	.058*
Model <i>R</i> ²			.245				.195	
Model F-statistic			11.744*** (df = 9, 326)				2.391* (df = 9, 89)	

N = 671; **p* < .05, ***p* < .01, ****p* < .001

♣ Estimated coefficients are significantly different between the two samples, ♣ < .05

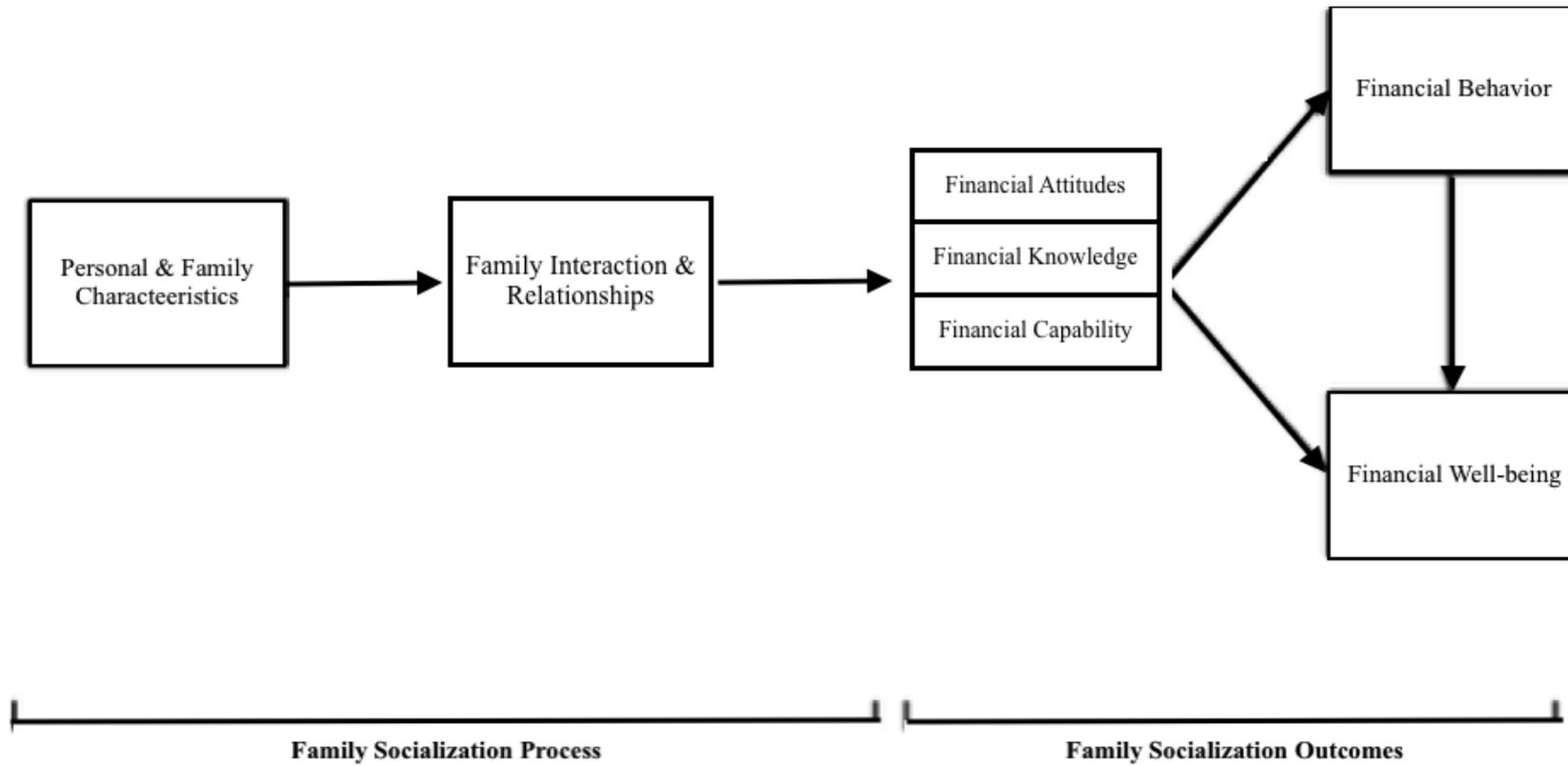


Figure 1. An Adapted Analytical Model of Gudmunson & Danes' (2011) Family Financial Socialization Theory

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Appendix A: Original Items

Number	Wording
1a.	I have a weekly or monthly budget that I follow.
1b.	I track my spending in order to stay within my budget.
1c.	I track all debit card transactions/checks to balance my account.
1d.	I pay my bills on time every month.
1e.	I add to my savings on a regular basis.
2a.	I rely on family members for financial advice.
2b.	I rely on friends for financial advice.
2c.	I am confident that I can manage my finances.
2d.	I manage my money well.
2e.	I have enough money to participate in most of the same activities as my peers do.
2f.	I have enough money to participate in most activities that I enjoy.
2g.	I regularly spend more money than I have by using credit or borrowing.
2h.	In the past three months, I purchased something expensive that I wanted, but did not need.
7a.	My parents or guardians were comfortable talking about money with me.
7b.	My parents or guardians told me what I needed to know about money management.
7c.	My parents or guardians were role models of sound financial management.
8a.**	Did you ever receive an allowance as a child (age 12 or younger)?
8b.**	Did you ever receive an allowance as a teenager (age 13 or older)?
8c.**	Did you work for pay while in high school?
8d.**	Did your parents or guardians encourage you to save money?
8e.**	Did your parents or guardians encourage you to open a bank account?
8f.**	Did your parents or guardians encourage you to invest your money?
26a.	I feel stressed about my personal finances in general.
26b.	I worry about being able to pay my current monthly expenses.
26c.	I worry about having enough money to pay for school.
26d.	When I think about my financial situation, I am optimistic about the future.
26e.	After graduation, I will be able to support myself financially.
26f.	I think that the cost of college or university is a good investment for my financial future.

- Q41.** Imagine that the interest rate on your savings account is 1% per year and inflation is 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?
- Q42.** Suppose you have \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much would you have in the account if you left the money to grow?
- Q43.** Suppose you borrowed \$5,000 to help cover college expenses for the coming year. You can choose to repay this loan over 10 years, 20 years, or 30 years. Which of these repayment options will cost you the least amount of money over the length of the repayment period?
- Q44.** All paycheck stubs show your gross pay (the total amount you earned before any taxes were taken out for the pay period) and your net pay (the amount of your check after all taxes). The taxes that are commonly taken out include federal, state and local income tax, Social Security tax, and Medicare tax. On average, what percentage of your income would you expect to receive as take-home pay?
- Q45.** Which of the following make up the TWO largest components of a credit score?

**Note: Items noted with asterisks were eliminated from the final factor solution due to low communalities (<.30).