

Cross-cultural Differences in Financial Risk-taking:

India and the United States

by

Priyang V. Baxi

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Abstract

Previous research has found that East Asians are more likely to take financial risks than Westerners. This behavior has been attributed to the “cushion hypothesis,” which emphasizes that a larger social network leads to higher risk-seeking behavior. However, only minimal research on risk-taking has been conducted on South Asians. The following study examined the “cushion hypothesis” among European Americans, South Asian Americans and Asian Indians. Participants completed Lubben’s Social Network Scale as well as financial, academic and medical risk-taking questionnaires. The results suggested that Asian Indians take more financial risks in lottery, but not in stock investment scenarios. Moreover, Asian Indians possessed a smaller social network in comparison to the other groups. Therefore, the “cushion hypothesis” cannot be applied to Asian Indians.

Keywords: Risk-taking, Asian Indian, South Asian American, cushion hypothesis

Cross-cultural Differences in Financial Risk-taking: India and the United States

Individuals are confronted with dilemmas that involve risk throughout their life whether at home or in the workplace. They are compelled to make risky decisions in several domains of life including finance, academics and health. The massive globalization occurring throughout the world has made the study of the cross-cultural effects on the social behavior and cognitive processes of decision-making important. A substantial amount of research has been conducted on the differences of the behavioral tendencies and thinking dispositions between East Asians and Westerners. However, only minimal research has compared the social behaviors and risk-taking strategies of South Asians and Westerners.

The South Asian countries of India, Pakistan, Afghanistan, Nepal, Bangladesh, Sri Lanka, Bhutan and the Maldives are experiencing extensive western influence as a result of an increase in tourism, media and international companies. For instance, the American franchises of McDonald's, Pizza Hut, Domino's, Subway and even Papa John's can easily be observed in several metropolitan and developed cities in the Republic of India. In fact, "Yum! Is the largest and fastest growing restaurant company in India with over 130 franchise-owned Pizza Huts in 34 cities and 27 KFCs in 9 cities" (Yum! Restaurant International, 2007). Additionally, India has a major position in the outsourcing market. The country occupies at least 50% of the total outsourcing market, and the U.S. outsources significantly more jobs to India than to China and Latin America (John & Tejaswi, 2010). These facts suggest that substantial interaction occurs between Asian Indians and European Americans in the business world. In their examination of business structures and practices in South and South-East Asia, Haley and Tan (1999) found that the diverse management practices of these regions have begun to affect Western companies as a result of globalization forces. Hence, carefully examining these various decision-making

strategies would be beneficial in ensuring productive business outcomes.

Moreover, the Asian Indian Diaspora has occurred throughout the world including the United States. The first wave of Indian migration to the U.S. took place between 1900 and 1910 when Sikhs from the State of Punjab arrived in California as farmers (Basu, 2010). After this period, the Asian Indian Diaspora to the U.S. continued as a result of the migration of students, professional workers such as doctors and engineers, and family members. Currently, Asian Indians are the fastest-growing population in the U.S. when compared to other Asian ethnic groups. According to the U.S. Census Bureau, the Asian Indian population in the U.S. grew at a rate of 35% from 1,679,000 in 2000 to 2,570,000 in 2007 (Basu, 2010). Therefore, it is highly probable that the Asian Indian community will continue to rapidly grow in the U.S., and the interaction between Asian Indians and European Americans will tremendously increase over time. As a result, it is essential to study the differences in the behavioral risk-taking strategies between European Americans and South Asians for successful interactions to occur in the fields of business, education and medicine.

Researchers have thoroughly compared the cognitive processes of East Asians and Westerners. Research suggests that these groups' perceptions of the world and thinking processes are significantly different. Nisbett, Peng, Choi, and Norenzayan (2001) have argued that East Asians are more holistic, focusing on relationships of objects without a sufficient utilization of categorization and formal logic. On the other hand, Westerners are more analytic, attending to a particular object and its categories utilizing formal logic (Nisbett et al., 2001).

Studies demonstrate that holistic and analytic tendencies appear among East Asians and Westerners from a young age, respectively. For instance, Liang-Hwang Chiu, in her study of object categorization, asked Chinese and American children to choose 2 objects that went

together from a pool of chicken, grass and cow pictures (as cited in Nisbett & Masuda, 2003). The results of this experiment indicated that East Asian children were more holistic, as they tended to group the cow and grass together based on the relationship that cows eat grass. On the contrary, the American children exhibited more analytic reasoning skills as they were prone to grouping the cow and chicken together based on the logic that they are both animals (Nisbett et al., 2003). Such studies led researchers to question if East Asians and Westerners exhibited these tendencies later in life.

Similar research performed on college students provided evidence for differences in decision-making among East Asian and American adults. Masuda and Nisbett (2001) presented Japanese and American college participants animated versions of underwater scenes and requested them to state their observations. The Japanese subjects described their observations more in terms of the scene, while the American participants tended to describe the salient large, speedy, or bright objects in the underwater vignette. The Japanese participants were also more accurate than the Americans in recognizing relationships between previously seen objects and the original scene (Masuda et al., 2001). These studies made researchers inquisitive about the cross-cultural effects of attention allocation on decision-making processes.

Studies have demonstrated that differences in the attention allocation exist among East Asians and Americans. Boduroglu, Shah and Nisbett (2009) administered a visual change detection paradigm on East Asian and American participants. They found that East Asians allocate their attention to a broader region and have better skills than Americans in perceiving color changes when colored blocks were expanded to occupy a larger area (Boduroglu et al., 2009). Overall, these various studies strengthen the point that cross-cultural differences in decision-making exist between East Asians and Westerners as a consequence of thinking

dispositions. The important question that arises from these experiments is if decision-making styles can be changed for efficient interactions to occur between different cultures in the business realm.

Recent studies indicate that financial risk-taking can be manipulated. Levav and Agro (2010) studied the effects of physical contact on financial risk-taking and its relation to the feeling of security. They conducted experiments in which a participant received physical contact in the form of a subtle pat on the shoulder or a handshake by an experimenter. The subject was then either presented with a lottery risk-taking survey or a risky-investment decision. The results of the study suggest that minimal physical contact by a female experimenter can substantially increase one's sense of security and, in return, lead one to higher financial risk-seeking decisions (Levav et al., 2010).

Hsee and Weber (1999) studied the differences in risk-taking between Chinese and Americans. They measured their participants' risk-index values by providing them gambling, investment, academic and medical risk-taking questionnaires. The results of the experiment provided significant evidence that Chinese take more risks than Americans in both lottery and stock scenarios. However, there were no significant differences between the groups in academic and medical risk-taking. Hsee and Weber (1999) attributed their findings to the "cushion hypothesis," which emphasizes that one's risk-seeking behavior depends on the size of one's social network or "cushion." Hence, if an individual possessed a large social network of dependable family and friends, the individual would be more likely to undertake financial risks. The reason this hypothesis upholds is because if one fails in their financial venture, they will have their "cushion" for support. On the contrary, if one is successful, one will be able to provide financial assistance to one's social network. It is necessary that similar research be

conducted on the South Asian population since culture significantly affects their business attitudes. In fact, Christie, Kwon, Stoeberl and Baumhart (2003) in their examination of influences of culture on the ethical attitudes of business managers in India, Korea and the United States found that national culture highly effects a business manager's ethical beliefs.

The primary goal of the subsequent research study was to examine the differences in financial risk-taking and its relation to the "cushion hypothesis" among participants from India and the United States. The research specifically focused on Asian Indians, South Asian Americans, and European Americans in an effort that they will be able to better understand each others' decision strategies in the business world.

The study followed a similar paradigm to that of Hsee and Weber's (1999) risk-taking experiment between Chinese and American individuals. China is a collectivist society where individuals significantly depend on each other when making important decisions. Likewise, Asian Indians are more collectivists as opposed to individualists. Dhawan, Roseman, Naidu, Thapa, and Resttek (1995) demonstrate this point in their administration of the Twenty Statement Test to Indian and American college students. Their analysis of these statements indicated that the Indian participants replied more in terms of social identity while the American individuals had more self-evaluative responses (Dhawan et al., 1995). Hence, India's prominently collectivist society predicts that this study would depict similar results to those obtained by Hsee and Weber (1999).

It is hypothesized that Asian Indians will be financially more risky in financial gambling and investment than South Asian Americans and Europeans Americans. Moreover, it is predicted that Asian Indians will exhibit a larger social network than South Asian Americans and European Americans, and it is this cushion that gears them to higher financial risk-seeking.

Method

Participants

Participants (N = 334) for this approved study by the Institute Research Board consisted of European Americans, South Asian Americans and Asian Indians. These participants were only permitted to participate in the study after providing written consent. The European American participants (n = 111) were students from the University of Michigan. They were recruited through the Introductory Psychology Subject Pool and received one half-hour of credit for their participation. The South Asian American participants (n = 55) were students from the University of Michigan and were recruited through South Asian student organizations such as the South Asian Awareness Network (SAAN) and the Indian American Student Association (IASA). The Asian Indian participants (n = 90) were students studying at different universities in the cities of Vadodara and Ahemdabad in Gujarat, India. Asian Indian participants (n = 78), who reside in destitute areas and work low salary jobs, such as gardeners, home cleaners, were recruited from the city of Vadodara and the village of Dahod in Gujarat, India. They received 50 rupees, which is equivalent to about 1 United States dollar, for their participation.

Materials and Procedure

The subjects participated in the study by answering various risk-taking and social network questionnaires. A qualified researched assistant provided all college participants a consent form, a survey packet and a writing utensil. The college students completed the following questionnaires (in order): a demographic questionnaire, a gambling risk questionnaire, an investment risk questionnaire, an academic risk questionnaire, a medical risk questionnaire and Lubben's Social Network Scale. Nevertheless, the Asian Indian Working Class subjects participated in the study through an interview because they were mostly illiterate. A qualified

research assistant asked them the questions in the language of their preference, either Hindi, or Gujarati, the local language of Gujarat, India. They were interviewed the following questionnaires (in order): a demographic questionnaire, a gambling risk questionnaire, a medical risk questionnaire and Lubben's Social Network Scale. They were not asked to participate in the investment and academic risk questionnaires as their lack of education would hinder them in comprehending the concepts of the surveys. The entire questionnaire or interview for each subject took approximately 20 minutes.

The gambling and investment questionnaires serve to measure a participant's financial risk index. The purpose of the Lubben Social Network scale is to measure the size of a subject's social network. The academic and medical surveys served as controls. Below are detailed descriptions of the questionnaires.

Demographics. The demographic questionnaire for college students in the United States and India consisted of questions about gender, age, marital status, religious affiliation, year in college, concentration, minor, parent's education, parent's profession, parent's annual salary, parent's financial obligations as well as one's salary and financial obligations if independent. Additionally, the South Asian American and European American subjects were asked whether they were born in the United States or, the age they migrated to the U.S.. These questions served to ensure that the participant was not a recent immigrant or an international student, which could have affected the results. The South Asian American participants were also asked which South Asian country or state in India their parents were from to confirm their South Asian heritage. Similarly, for the same purpose, the Asian Indian college subjects were asked their own or their parent's native regional state in India (See Appendix A). The Asian Indian Working Class

participants were only requested the demographics of age, marital status, religious affiliation, native state, yearly household income and financial obligations (See Appendix B).

Lottery Risk-taking. The purpose of this survey was to measure a participant's financial risk index in terms of gambling. It was adapted and modified from Hsee and Weber (1999). The questionnaire stated that the participant recently won a lottery and can obtain the reward by selecting a non-risky or a risky option. The non-risky choice guaranteed the participant a fixed amount of money while the risky option required a risk by flipping a coin and obtaining a large amount if heads and losing everything if tails. There were a total of 7 scenarios in which the non-risky option increased for every question while the risky option remained constant. All amounts were converted into Indian Rupees using an approximate conversion rate of \$1 = Rs. 50 for the Asian Indian and Asian Indian Working class participants (See Appendix C).

Investment Risk-taking. The purpose of this questionnaire, adapted from Hsee and Weber (1999), was to calculate a subject's financial risk index in terms of stock investments. The questionnaire asked a participant to select a risky stock or a non-risky savings account option to invest their saved money. There were a total of 3 scenarios in which the return rate for the savings option varied at 2%, 4% and 6% for each scenario, respectively. However, the stock option return rate of either 0% or 8% remained constant (See Appendix D).

Academic Risk-taking. The focus of this survey, adapted from Hsee and Weber (1999), was to measure a participant's risk index in terms of education. The questionnaire stated that the participant was required to write an essay as part of a class requirement for a business course. They were requested to choose between a risky provocative and a non-risky conservative paper topic. There were a total of 3 scenarios in which the provocative topic option score of either 60

or 100 points remained constant. Nevertheless, the score for the conservative topic option varied at exactly 70, 80 and 90 points for each scenario, respectively (See Appendix E).

Medical Risk-taking. The focus of this questionnaire, also adapted from Hsee and Weber (1999), was to calculate a subject's medical risk index. The survey mentions that the participant was experiencing a severe headache and visited the doctor. The doctor advised that the subject take one of two imported medications to decrease the duration of the headache. The participant was asked to select between a risky and non-risky medication in 3 scenarios to reduce the duration of the headache. The first tablet, Drug A, involved a risk that could either reduce the period of the headache by 0 or 8 days. This risky option remained constant for all 3 scenarios. However, the other option involving the second pill, Drug B, could lessen the interval of the headache by exactly 2, 4 and 6 days for each scenario, respectively (See Appendix F).

Family Networks. This Lubben Social Network Scale was utilized to measure a participant's social network (cushion) in terms of family and friends. This questionnaire created by Lubben and Gironda consisted of a total of 12 questions. The first 6 questions were related to an individual's family members and relatives. The last 6 questions referred to one's friends and neighbors. The answer choices consisted of 6 options ranging either "0" to "9 or more" for some questions and "never" to "always" for the others. A selection of an option to the right represented a higher cushion score (See Appendix G).

Analysis

All of the data collected from the questionnaires was entered on an excel spreadsheet. A slightly modified risk preference index designed by Hsee and Weber (1999) was used to measure a subject's risk value in the gambling, investment, academic and medical questionnaires. The participant received a score of 1 every time the risky option was selected in each survey. For

instance, in the gambling risk questionnaire, a participant received a point every time the risky option of flipping the coin was chosen in each scenario. Hence, the subject obtained a risk-index score between 0 and 7 where 0 and 7 represented the most risk-averse and risk-seeking behaviors, respectively. On occasions, a participant's selection of choices represented an erratic pattern. In the gambling risk questionnaire, this situation occurred when the subject selected a larger guaranteed amount of money over a smaller risk-related amount. In such instances, the participant was not given a risk-index score. The stock investment, academic and medical questionnaires were coded in an identical manner. However, the resulting range scores in these surveys were between 0 and 3. In the Lubben Social Network Scale, a subject received a score between 0 and 5 for each question. The first option of either "none" or "never" represented a score of 0 while the last option of "nine or more" or "always" represented a score of 5. The score for each of the 12 questions was added and the participant received a score between 0 and 60. A higher score indicated that subject possessed a larger social network. Once all the data had been entered and coded, the excel spread sheet was converted to the statistical software program, PSAW. ANOVA and correlation tests were conducted in order to test the hypothesis.

Results

The results of the study support part of the hypothesis that Asian Indians are riskier than South Asian Americans and European Americans in financial terms. A Univariate ANOVA test demonstrates that there is a significant interaction between subject ethnicity and financial lottery risk index ($F(3,310) = 19.850, p = 0.000$). However, a Univariate ANOVA test between subject ethnicity and financial investment risk index portrays that there is no significant interaction between these variables ($F(2,241) = 0.017, p = 0.983$). These results indicate that Asian Indians tend to take more financial risks in gambling scenarios (Figure 1). Nevertheless, their financial

risk-seeking decisions in stock investments do not significantly differ from those of European Americans and South Asian Americans (Figure 2).

Moreover, the hypothesis that there are no significant differences in the risk-seeking behavior between Asian Indians, South Asians Americans and European Americans in the fields of education and medicine is upheld. A Univariate ANOVA test provides evidence that there is no significant interaction between subject ethnicity and academic risk index ($F(2,237) = 2.011$, $p = 0.136$) (Figure 3). Similarly, a Univariate ANOVA test between subject ethnicity and medical risk index depicts that there is no significant interaction between the variables ($F(3,198) = 2.118$, $p = 0.099$) (Figure 4).

Nonetheless, the results of the study do not offer sufficient evidence that Asian Indians have a larger dependable social network than South Asian Americans and European Americans. A Univariate ANOVA test reveals that there is a significant interaction between subject ethnicity and cushion score ($F(3,324) = 38.996$, $p = 0.000$). However, the results indicate that Asian Indians have a smaller social network than European Americans and South Asian Americans (Figure 5).

Overall, the data does not portray ample evidence in support of the “cushion hypothesis” for Asian Indians. A correlation test between lottery risk index and cushion score illustrates that a larger cushion leads to lower risk-taking decisions ($r(309) = -0.286$, $p < 0.01$) (Table 1). On the other hand, a correlation test between stock investment risk index and cushion score shows that a larger cushion leads to higher risk-seeking decisions ($r(238) = 0.153$, $p < 0.05$) (Table 1).

Discussion

The hypothesis that Asian Indians are riskier than South Asian Americans and Europeans Americans in the field of finance as a result of possessing a larger social network is not fully

supported by the results of the study. Asian Indians are riskier than South Asian Americans and European American in lottery situations. However, this same effect is not observed in stock investments. Moreover, the results indicate that the higher lottery risk-seeking behavior among Asian Indians is not due to the size of their social network. These results suggest that cross-cultural differences in some realms of finance do exist between the United States and India, providing beneficial information to the fields of international business, social psychology and cognitive science.

These results are different from those found in previous studies. For instance, Hsee and Weber (1999) found sufficient evidence to conclude that Chinese are financially riskier than Americans in both the lottery and stock investments due to their large network of family and friends. Although India is a collectivist society like China, the “cushion hypothesis” does not apply to them in the domain of finance.

Alternatively, one could interpret that India’s economy could have affected the Asian Indians decisions in the stock investment questionnaire. Orpen (1983) examined how economic growth of a country can affect the risk-taking attitudes of managers. He tested Indian, American and Japanese managers at an international conference through attitude-to-risk and need-for-achievement scales. During this period, India, the United States and Japan were experiencing slow, medium and rapid economic growths, respectively. The results of this study suggested that the higher economic growth of a country, the more likely business managers from those nations would take risks in solely potentially profitable scenarios (Orpen, 1983).

India’s economy has experienced several negative effects these past few years. During the period of October to December 2008, more than 500,000 individuals lost their jobs (“Stock market decline,” 2011). According to this same article, India’s economic growth dropped 6.7%

between 2008 and 2009, and its stock market has currently declined at rate of 15% (2011). These detrimental effects on India's economy may have affected the Asian Indian subjects' decisions on the stock investment questionnaires. However, the original interpretation that Asian Indians are financially riskier is correct because the lottery questionnaire also measured their financial risk index.

Nevertheless, one weakness of this study could be that the Asian Indian College participants were recruited from various universities in Gujarat. Therefore, a student's academic credential serves as a possible confounding variable that may have affected one's decision-making behavior. Another weakness of this study could be the experimental method used for the Asian Indian Working Class. The interview conducted by a South Asian American researcher may have biased the responses of the participants. Potentially, these weaknesses could be addressed by designing an experiment with Asian Indian participants from the same university, and Asian Indian Working Class participants tested by an Asian Indian researcher.

However, overall this study is strong because of the two different financial risk-seeking surveys, and the presence of the control academic and medical risk-taking questionnaires that did not measure financial risk preferences. Moreover, the participants completed the surveys in a written format under the supervision of the researcher in both the United States and India. This method proved to be tremendously valuable as it allowed participants in India to easily clarify questions they had in terms of comprehension.

This experiment leads one to question the other factors that may be responsible for Asians Indians to be financially riskier, since it is not the size of their social network. It would be valuable to address these questions by designing experiments that involve variables such as physical contact, beliefs about intelligence and stock market conditions.

Overall, this study is important because it successfully examines the financial risk-seeking behavior of Asian Indians, South Asian Americans and European Americans in an increasing globalized world. The results of this study will assist Indian and American companies to better understand each other's risk-taking strategies. This will allow for fair and successful interaction in business communication and ventures.

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Author Note

Priyang V. Baxi, Department of Psychology, University of Michigan, Ann Arbor.

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Table 1

There is a significant relationship between a larger cushion and lower risk-seeking behavior in the lottery scenarios and higher risk-taking decisions-making in stock investments

	Total Cushion Score
Lottery Risk Index	-0.286**
Stock Risk Index	0.153*
Academic Risk Index	-0.31
Medical Risk Index	0.012

Note.

**Indicates significant correlation at the 0.01 level (2-tailed).

*Indicates significant correlation at the 0.05 level (2-tailed).

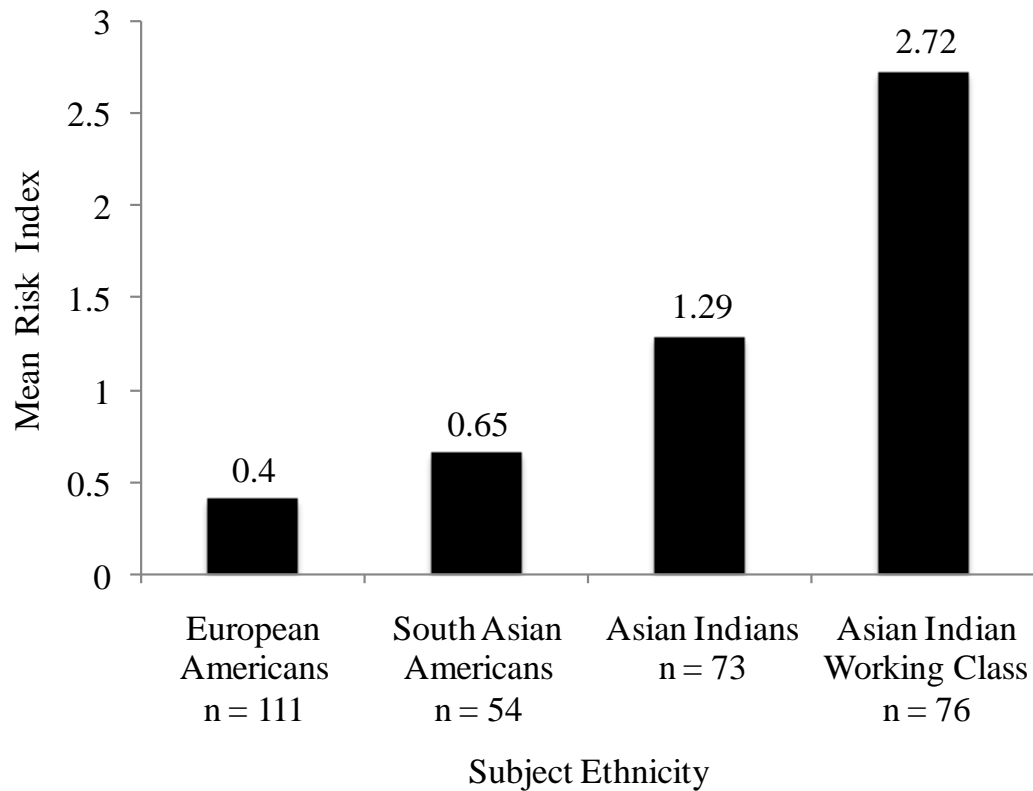


Figure 1. Asian Indians take more financial lottery risks. The y-axis represents the mean risk index value (0-3) on the financial gambling questionnaire and the x-axis signifies a subject's ethnicity: European American, South Asian American, Asian Indian and Asian Indian Working Class. N corresponds to the sample size in each group.

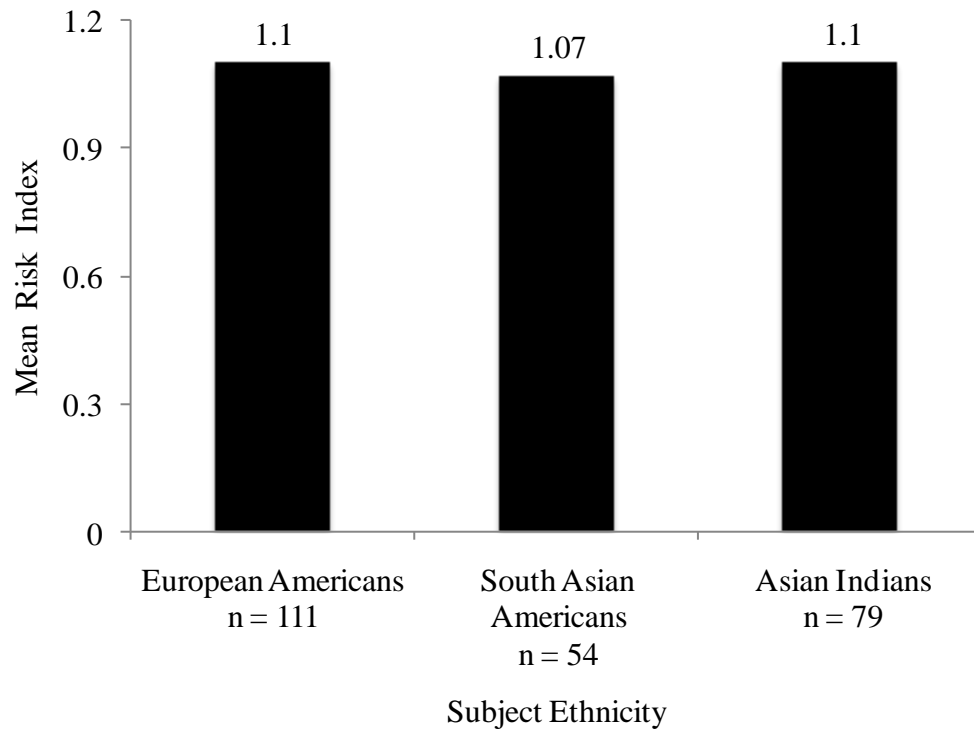


Figure 2. There are no significant differences between the groups in financial stock risks. The y-axis represents the mean risk index value (0-1.2) on the financial stock investment survey and the x-axis portrays a subject's ethnicity: European American, South Asian American and Asian Indian. N signifies the sample size in each group.

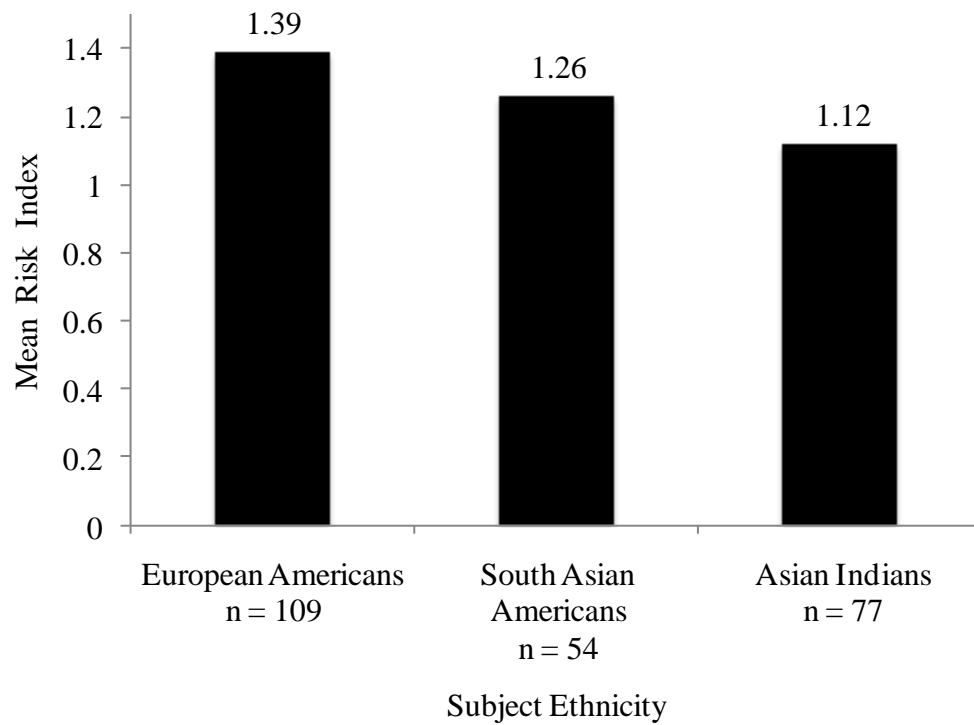


Figure 3. There are no significant differences between the groups in educational risk-taking.

The y-axis represents the mean risk index value (0-1.4) on the academic risk-taking questionnaire and the x-axis depicts a subject's ethnicity: European American, South Asian American and Asian Indian. N corresponds to the sample size in each group.

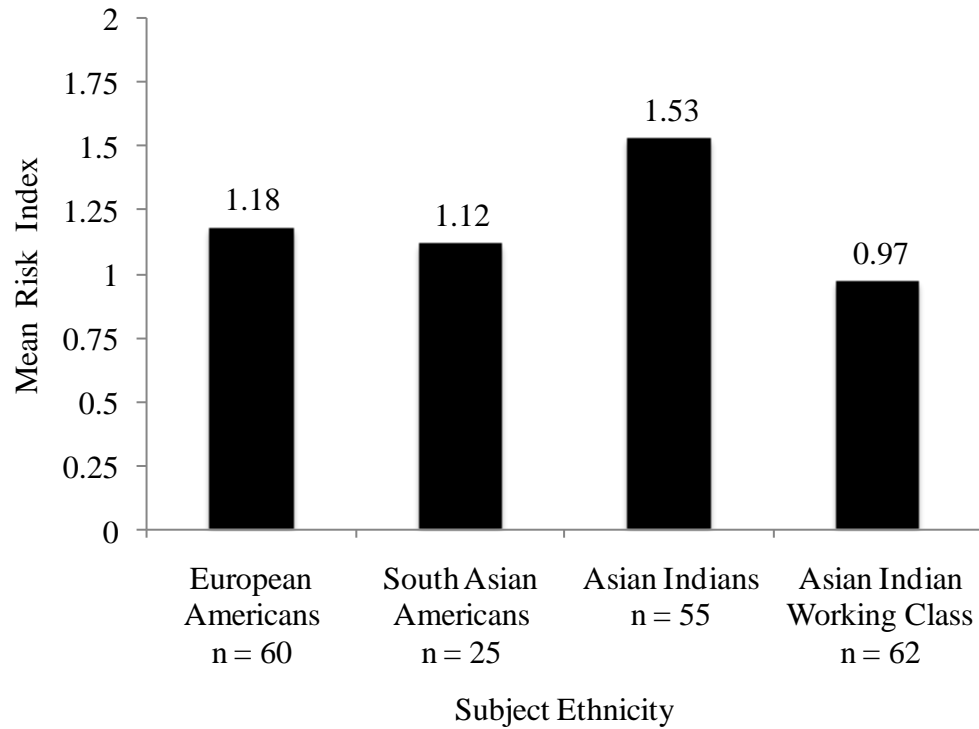


Figure 4. There are no significant differences between the groups in medical risk-seeking behavior. The y-axis represents the mean risk index value (0-2) on the medical risk-taking questionnaire and the x-axis signifies a subject's ethnicity: European American, South Asian American, Asian Indian and Asian Indian Working Class. N indicates the sample size in each group.

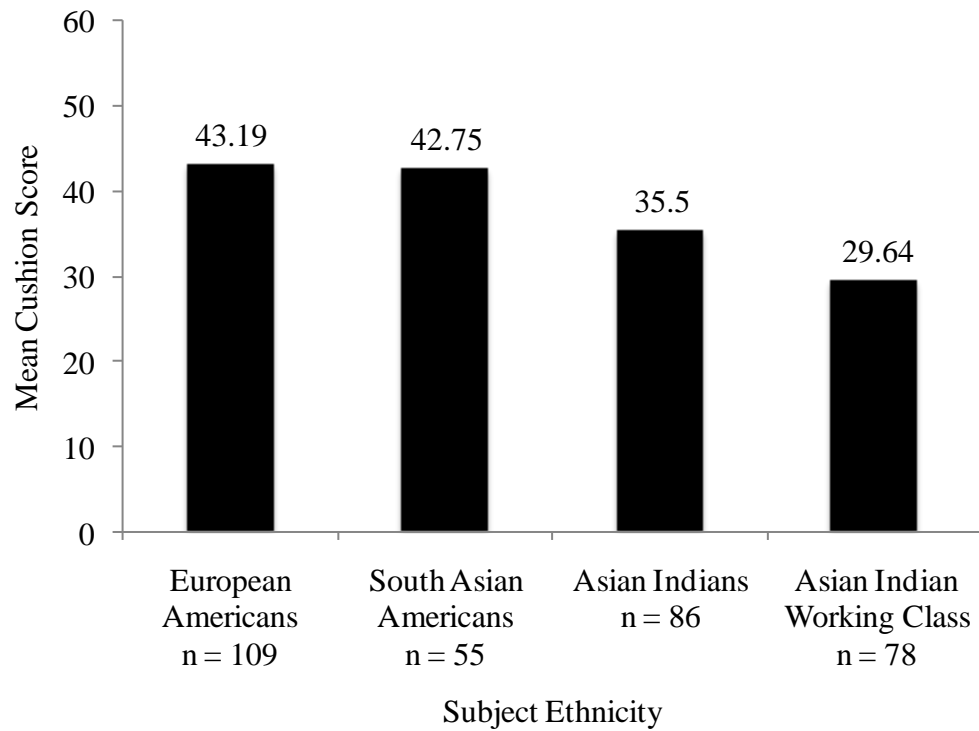


Figure 5. Asian Indians have a smaller social network. The y-axis represents the means cushion score (0-60) on Lubben's Social Network Scale and the x-axis corresponds to a subject's ethnicity: European American, South Asian American, Asian Indian, and Asian Indian Working Class. N represents the sample size in each group.

Appendix A

Demographics Questionnaire (South Asian American Version)

1. What is your gender?
 - a. Male
 - b. Female
2. How old are you? _____
3. What is your current marital status?
 - a. Single
 - b. Married
 - c. Separated
 - d. Divorced
 - e. Widowed
4. What is your religious affiliation?

<ol style="list-style-type: none">a. Protestant Christianb. Roman Catholicc. Evangelical Christiand. Jewishe. Hindu	<ol style="list-style-type: none">f. Muslimg. Buddhisth. Not religiousi. Other _____
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5. What year in college are you?

<ol style="list-style-type: none">a. Freshman (first-year student)b. Sophomore (second-year student)c. Junior (third-year student)	<ol style="list-style-type: none">d. Senior (fourth-year student)e. Graduate Studentf. Phd. Student
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6. What is your major? _____

7. What is your minor if you have one? _____
8. Are you pursuing any of the following fields in college?
- a. Pre-med
 - b. Pre-health (dentistry, pharmacy, public-health etc.)
 - c. Pre-law
 - d. None
9. What State in India or South Asian country are you or your parents a native of?

10. Were you born in the United States?
- a. Yes
 - b. No
11. If you answered ‘No’ to question 10, how old were you when you migrated to the United States? _____
12. What is the highest level of education your father has completed?
- a. Less than high school
 - b. High school or GED
 - c. Some college
 - d. 2-year college degree (Associates)
 - e. 4-year college degree (BA,BS)
 - f. Master's degree
 - g. Doctoral degree (PhD)
 - h. Professional Degree (MD,JD)
13. What is the highest level of education your mother has completed?
- a. Less than high school
 - b. High school or GED
 - c. Some College
 - d. 2-year college degree (Associates)
 - e. 4 year college degree (BA,BS)
 - f. Master’s degree
 - g. Doctoral degree (PhD)
 - h. Professional degree (MD,JD)
14. What is your father’s current profession? _____

15. What is your mother's current profession? _____

16. What is your parents'/primary provider(s) yearly household income? If you have divorced parents, please select the income that represents the person(s) who primarily provide for you.

- | | | |
|-----------------------|----------------------|------------------------|
| a. Less than \$10,000 | e. \$40,000-\$49,999 | i. \$80,000-\$89,999 |
| b. \$10,000-\$19,999 | f. \$50,000-\$59,999 | j. \$90,000-\$99,999 |
| c. \$20,000-\$29,999 | g. \$60,000-\$69,999 | k. \$100,000-\$149,999 |
| d. \$30,000-\$39,999 | h. \$70,000-\$79,999 | l. More than \$150,000 |

17. How many people are your parents/primary provider(s) financially obligated to (who your parents help in times of need)? Please include everyone including friends, family and relatives in this count. *In this count, please include, dependents (the number of people in your household that are primarily supported by your working parent(s) --include all adults and children, including parents and grandparents in your household). Please also include additional people your parents provide some financial help to, such as a grandparent in a nursing home or a cousin in college.* _____

18. If you are financially independent (or mostly independent) from your parents, then please answer this question: What is your yearly income?

- | | |
|-----------------------|------------------------|
| a. Less than \$10,000 | g. \$60,000-\$69,999 |
| b. \$10,000-\$19,999 | h. \$70,000-\$79,999 |
| c. \$20,000-\$29,999 | i. \$80,000-\$89,999 |
| d. \$30,000-\$39,999 | j. \$90,000-\$99,999 |
| e. \$40,000-\$49,999 | k. \$100,000-\$149,999 |
| f. \$50,000-\$59,999 | l. More than \$150,000 |

19. If you are financially independent (or mostly independent) from your parents, then please answer the question below. Assuming you have the financial means, how many people are you financially obligated to (who you help in times of need)? Please include everyone including friends, family and relatives in this count. *In this count, please include, dependents (the number of people in your household that are primarily supported by you --include all adults and children, including parents and grandparents in your household. Please also include additional people you provide some financial help to, such as a grandparent in a nursing home or a cousin in college).* _____

NOTE: For questions 16 and 18, Asian Indian college participants were not provided options a. through l., but instead a blank line to write the yearly incomes in Indian Rupees.

Appendix B

Demographics Questionnaire (Asian Indian Working Class)

1. How old are you? _____
2. What is your current marital status?
 - a. Single
 - b. Married
 - c. Separated
 - d. Divorced
 - e. Widowed
3. What is your religion?
 - a. Christianity
 - b. Hinduism
 - c. Islam
 - d. Buddhism
 - e. Not religious
 - f. Other _____
4. Are you from Gujarat? _____ If not, which state are you from? _____
5. What is your (approximate) yearly household income in rupees? _____
6. How many people are you financially obligated to? Please include, friends, family and relatives. _____

Appendix C

Risk-Taking Gambling Questionnaire (South Asian American Version)

Suppose that you bought a lottery ticket a week ago. You are now informed that you have won and have been given two options of how to receive the money.

Circle the option a or b that you would chose in each of the following decisions.

Scenario 1

- a. Receive \$400 for sure b. Flip a coin; receiving \$2000 if H or \$0 if T

Scenario 2

- a. Receive \$600 for sure b. Flip a coin; receiving \$2000 if H or \$0 if T

Scenario 3

- a. Receive \$800 for sure b. Flip a coin; receiving \$2000 if H or \$0 if T

Scenario 4

- a. Receive \$1000 for sure b. Flip a coin; receiving \$2000 if H or \$0 if T

Scenario 5

- a. Receive \$1200 for sure b. Flip a coin; receiving \$2000 if H or \$0 if T

Scenario 6

- a. Receive \$1400 for sure b. Flip a coin; receiving \$2000 if H or \$0 if T

Scenario 7

- a. Receive \$1600 for sure b. Flip a coin; receiving \$2000 if H or \$0 if T

NOTE: Adapted and modified from Hsee and Weber (1999)

Appendix D

Stock Questionnaire (South Asian American Version)

You have some savings. Suppose that there are only two investment options:

A: Buy a particular stock: Its return rate will vary

B: Put the money in a savings account: Its return rate is fixed.

(Return rate refers to annual return rate here. For example, a return rate of 4% means that for every \$1000 you invest, you will get \$40 extra after a year.)

From either option, you can withdraw your money at any time without penalties. Suppose that there are the only investment options available, and that you can choose only one of the two, not both. Assume also that if you want to buy the stock, you must buy it now. If you miss this chance, you can't buy it later.

Each scenario below describes the return rates of the two options. Circle the option a or b that you would choose in each of the following scenarios.

Scenario 1

a. Stock: either 0% or 8% with equal probabilities b. Savings: exactly 2%

Scenario 2

a. Stock: either 0% or 8% with equal probabilities b. Savings: exactly 4%

Scenario 3

a. Stock: either 0% or 8% with equal probabilities b. Savings: exactly 6%

NOTE: Adapted and modified from Hsee and Weber (1999)

Appendix E

Academic Questionnaire

You are taking an important business course now. Your final grade for this course will depend heavily on an essay (paper) that will be due next week. Scores on the paper can range anywhere from 0 to 100.

You are debating whether to write on a conservative (traditional) topic or on a provocative (tending to provoke or irritate) topic. If you choose the conservative topic, you know how much your professor will like it and what score you will receive. If you choose the provocative topic, you don't know how much your professor will like it and don't know what score you will get.

Each scenario below describes your estimates of what score you will get on the paper if you write on the conservative topic or the provocative topic. Circle the option a or b that you would choose in each of the following scenarios.

Scenario 1

- a. Provocative topic: either 60 or 100 with equal probabilities
- b. Conservative topic: exactly 70

Scenario 2

- a. Provocative topic: either 60 or 100 with equal probabilities
- b. Conservative topic: exactly 80

Scenario 3

- a. Provocative topic: either 60 or 100 with equal probabilities
- b. Conservative topic: exactly 90

NOTE: Adapted and modified from Hsee and Weber (1999)

Appendix F

Medical Questionnaire

You are experiencing a severe headache. After a thorough examination, your doctor told you that it is not serious, will automatically go away and will not cause any permanent damages. However, it will take 10 days before it goes away if you don't take any medicine.

There are two imported drugs on the market that can help reduce the duration of your headache: Drug A and Drug B. Both drugs are free with your doctor's prescription.

Each scenario below describes the number of days by which each drug will reduce the duration of your headache. Circle the option a or b that you would choose in each of the following scenarios.

Scenario 1

- a. Drug A: reduce headache by either 0 or 8 days with equal probabilities
- b. Drug B: reduce headache by exactly 2 days

Scenario 2

- a. Drug A: reduce headache by either 0 or 8 days with equal probabilities
- b. Drug B: reduce headache by exactly 4 days

Scenario 3

- a. Drug A: reduce headache by either 0 or 8 days with equal probabilities
- b. Drug B: reduce headache by exactly 6 days

NOTE: Adapted and modified from Hsee and Weber (1999)

