Emerald Article: Financial well-being of Malaysian college students

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Abstract

Purpose – The purpose of this paper is to examine the relationships between personal and family backgrounds, academic ability, childhood consumer experience, financial socialization, financial literacy, and perceived financial well-being of college students.

Design/methodology/approach – Data were collected using a multi-stage sampling technique from 11 public and private universities across Malaysia and the sample consists of 2,219 college students. Structural equation modelling was utilized to test the hypotheses.

Findings – Childhood consumer experiences such as savings habits contribute to students' financial well-being (money saved, current financial situation, and financial management skills). Financial socialization agents, for example, through parents and religion sources could increase college students' financial well-being. Financial literacy was related to financial well-being. There were important differences between the Malay and Chinese ethnic groups in Malaysia.

Research limitations/implications – Overall, implications and recommendations for future research, teaching, and public policy are also provided for parents, college administrators, counselors and educators.

Originality/value – This research provides meaningful information about how various factors (childhood experience, financial socialization, and financial literacy) predict students' financial well-being.

Keywords Malaysia, Universities, Students, Personal finance, Financial well-being, Financial literacy, Financial socialization, Childhood consumer experience

Paper type Research paper

Introduction

The growing literature on college student financial literacy and economic well-being has rarely expanded beyond populations living in the USA. In the existing literature, college students are often considered a high-risk group when it comes to financial stability. Many borrow to obtain an education and carry considerable debt into jobs where they earn entry-level salaries (Leach *et al.*, 1999). Other forms of debt from credit cards, car loans, and other consumer debts are not uncommon among these students. Unfortunately, many college students have low levels of financial literacy (Chen and Volpe, 1998; Henry *et al.*, 2001; Murphy, 2005; Lusardi *et al.*, 2010). Poor financial literacy among college students is associated with ineffective financial behaviors, including low savings (Sabri and MacDonald, 2010), poor record keeping (Chen and Volpe, 1998), and more credit card debt (Norvilitis *et al.*, 2006). Norvilitis and Santa Maria (2002) confirmed that many students enter college with no budgeting experience and are liable to use credit unwisely. This combination of high debt, low income, and

Asian Education and Development Studies
Vol. 1 No. 2, 2012
pp. 153-170

2046-3162
DOI 10.1108/20463161211240124

low levels of financial literacy adversely affects college student financial well-being (Leach *et al.*, 1999).

To combat these challenges, educators and researchers have focussed not only on expanding education, but on understanding the socialization processes whereby students develop their attitudes, skills, and behaviors regarding money. For instance, Shim *et al.* (2010), recently outlined a financial socialization process that shows how parents and educators boost financial learning, attitudes, and behavior among college students. When considered for populations outside the USA, this model should be adapted to the regional and cultural differences that could impact student financial well-being. Therefore, the purpose of this study is to increase understanding about the role of parents, peers, media, school, and religion on financial literacy and financial well-being among Malaysian college students. Expanded understanding of financial well-being beyond the borders of the USA will further underscore the processes that are common to the college experience of college students and highlight the forces that are unique to a particular place and time.

In addition to the financial socialization forces that are common to all college students, Malaysian college students should be affected by several cultural and regional factors that are characteristic of the region. Although Malaysia is an ethnically diverse country, on the whole its ethnic groups share some common differences with western cultures. According to Zawawi (2008), Malaysian values include work ambition, filial piety, honesty, and being knowledgeable and trustworthy. The importance of extended family may be greater than in the west. Strong expectations regarding academic and financial success through patriarchal family structures more often result in avoiding shame, pressure for academic achievement, and authoritarian behavior between generations (Manery, 2000). Malaysian values involve respecting elders, holding a group orientation (Jamal, 2006), having harmonious relationships, concerns for face saving, and a religious orientation (Abdullah, 2001). At home, parents are expected to teach children to obey rules and gain respect from children. Furthermore, Malaysian culture is more focussed on collectivism rather than individualism as is more often expressed in the west (Hofstede, 2001; Triandis, 2004).

Within Malaysia, there are also ethnic group differences. The two largest ethnic groups in the country are Malay and Chinese. The Malay constitute 67.3 percent of the population, and thus are culturally predominant and maintain the greatest influence in the government In contrast, the Chinese, comprise only 24.5 percent of the population, but have a significant presence in the corporate business sector. Indians comprise most of the remaining population, and have less societal influence in Malaysia (Joseph, 2008).

To a great extent, the beliefs, culture, values, and norms of the Malays are defined by their adherence to the religion of Islam. As in many other places in the world, Islamist teaching in Malaysia is focussed on being loving and peaceful and this ethnic group's predominance in government translates into efforts to inculcate "Islamization" in the lifestyles of the Malays. Traditional values include a culture of submission and respect for elders, accepting one's destiny as fate ordained by "Allah," and modesty in dress. Consequently, Malay families have sometimes been characterized as taking greater steps to emphasize family harmony and cohesiveness, as compared with Chinese families living in the country.

The Chinese living in Malaysia are more likely to practice Buddhism or Christianity. Studies have shown that the Chinese living in Malaysia have a shorter-term orientation to their efforts in the economy, which may lead to greater emphasis on prestige, recognition, and social status. Compared with the Malay, the Chinese may focus more on independence and demand for quicker results in this culture (Lai *et al.*, 2010). Chinese consumers were identified as more brand and novelty-fashion conscious, shopping more for enjoyment, and preferring quality over choice (Mokhlis, 2009). Sharing only some of these characteristics, the Malay Muslim population was likely to be quality oriented, perfectionistic, and brand loyal (Kamaruddin, 2007). As Mokhlis (2009) notes, cultural differences influence the beliefs, values, and behavioral tendencies that contribute to financial well-being.

Our proposed conceptual model is shown in Figure 1. This model draws together predictors that are expected to underlie the effectiveness of socialization agents (e.g. parents, peers, religion), and influence financial literacy and financial well-being among the Malaysian college-student population. In this study we define financial well-being as "a state of being financially healthy, happy, and free from worry" which is based on a subjective appraisal of one's financial situation (Joo, 2008, p. 22). In other studies, financial well-being has been measured by overall satisfaction with one's financial situation (Van Praag *et al.*, 2003). Most previous studies on financial well-being have been conducted among adults or employees; few studies involved college students (Van Praag *et al.*, 2003; Joo, 2008; Malone *et al.*, 2010). We have followed Joo and Grable's (2004) recommendation that the determinants of financial well-being incorporate objective, subjective, and behavioral measures into a single empirical test of individual financial satisfaction. These multi-dimensional measures were used as indicators of our latent financial well-being outcome (see Figure 1). Our review of literature identifies the various factors that were expected to lead up to financial well-being for Malaysian college students as outlined in Figure 1.

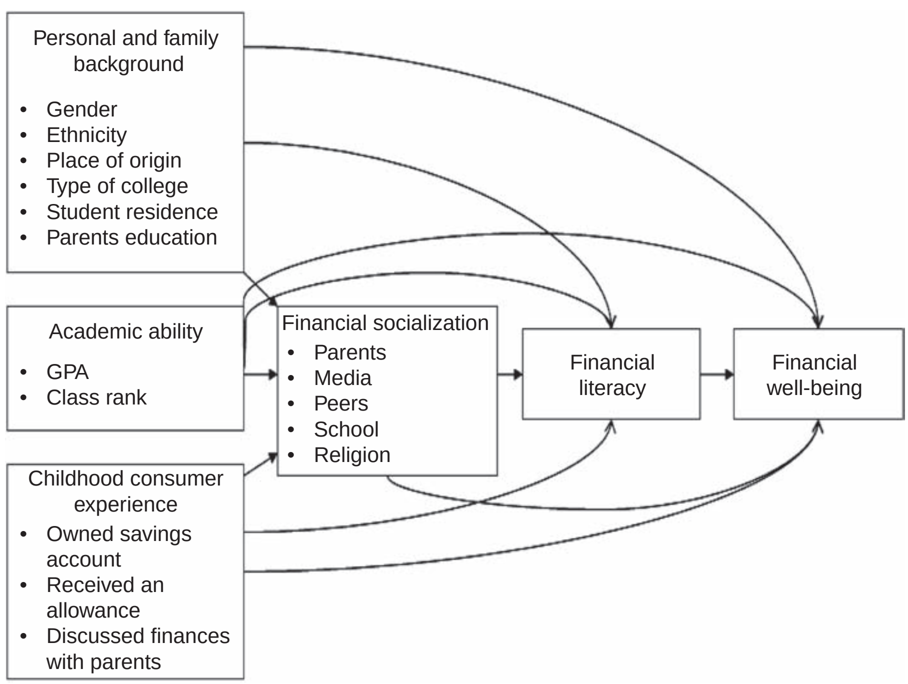


Figure 1.
The proposed conceptual model

Literature review

Factors underlying the effectiveness of financial socialization agents

Socioeconomic and demographic factors such as gender, ethnicity, age, income, education, and marital status influence financial well-being (Hira and Mugenda, 1999a, b; Leach *et al.*, 1999; Joo and Grable, 2004). For example, financial well-being is positively related to age, income, and education. Recent studies on the financial well-being of college students found gender, age, ethnicity, and parental income (Xiao *et al.*, 2009; Shim *et al.*, 2010) were positively related to financial well-being.

Academic ability has been used to predict financial literacy and financial well-being in a number of studies (Chen and Volpe, 1998, 2002; Sabri *et al.*, 2010; Shim *et al.*, 2009). A high GPA reflects a student's ability to learn and apply information, to show academic discipline, and function within societal systems outside of the family. These capabilities increase the chances that individuals will learn successful financial management from the socialization agents included in our study.

Our model proposes that childhood consumer experience will heighten the college students ability to be positively influenced through financial socialization. Discussing family finances with parents is a positive influence on financial literacy. Involvement with important aspects of family finance improved knowledge and experience about money management among Malaysian college students (Sabri *et al.*, 2010) confirming previous findings which reported that the more parents talked about money matters with their children, the more knowledgeable the children felt about personal finance as college students (Shim *et al.*, 2009). Peng *et al.* (2007) found that college students who held a bank account before age 18 had greater investment knowledge. These effects are even more profound if savings accounts are opened at younger ages (Sabri *et al.*, 2010). Kotlikoff and Bernheim (2001) found that individuals who had an allowance, bank account, or investment when they were children saved more of their income as adults.

Agents of financial socialization

Previous research shows that parents, peers, printed media, television commercials, and formal education are the most important agents of consumer socialization (Moschis and Churchill, 1978; Moschis, 1987). Danes (1994) defines consumer socialization as "the process of acquiring and developing values, attitudes, standards, norms, knowledge, and behaviors that contribute to the financial viability and well-being of the individual" (p. 128).

As agents of socialization, parents have the most significant influence on children as they learn consumer behavior (Caruana and Vasallo, 2003; Lachance and Legault, 2007; Hayta, 2008). Parents are a key source of financial information for teens and college students (Pinto *et al.*, 2005; Lyons *et al.*, 2006; Peng *et al.*, 2007). Lyons *et al.* (2006) found that the majority of college students (76.7 percent) indicated that they had gone to their parents for financial information. Bowen (2002), in a study of financial literacy of teens and their parents, found the way young people learn about financial matters is likely to be a combination of intentional and unintentional strategies by parents and other key adults in their lives (see also, Gudmunson and Danes, 2011). Furthermore, parents play a significant role in shaping a child's financial habits and values (Pinto *et al.*, 2005).

Peers become increasingly important during adolescence as children become more independent from parents. Peer groups contribute to effective learning about monetary values and social motivation (Moschis and Churchill, 1978; Hayta, 2008). Lachance and

Legault (2007) found that peer-group acceptance and the receipt of consumer information obtained from peers were significantly related to students' attitudes and consumption behaviors.

In the school years, teachers play an important role in shaping children's consumption behaviors (Ozgen, 1995). Particularly during adolescence, children spend more combined time at school and with friends than they do with family. According to Varcoe *et al.* (2001), information provided at school regarding economics has an important effect on the child in terms of acquiring and shaping skills, and behaviors related to consumption.

Media such as television, radio, newspaper, and the internet also plays an important role in the economic socialization of adolescents (Hayta, 2008; Koonce *et al.*, 2008; Varcoe *et al.*, 2010). Lachance and Legault (2007) revealed that media (television, internet, magazines, and newspapers) were the second most important socialization influence on college students' attitudes toward consumption (defined as credit, advertising, and commercial practices).

Although not yet identified as one of the most important agents of consumer socialization in current research, religion is likely to be an important factor for Malaysian college students. Bailey and Sood (1993) examined the effects of religious affiliation on consumer behavior and found variations in consumerism among different religious groups. Little research has examined the effect of religion specifically on financial behavior, financial literacy, or financial well-being. Religion and its associated practices often play a pivotal role in influencing how individuals cope with important life transitions. This study hopes to fill this research gap by examining the effect of religion on the financial literacy and financial well-being of college students.

Financial literacy

There is considerable evidence that many college students lack sufficient knowledge to effectively manage their personal finances (Chen and Volpe, 1998; Avard *et al.*, 2005; Murphy, 2005; Norvilitis *et al.*, 2006). Despite the many studies that have examined the relationship between financial literacy and financial behavior (Chen and Volpe, 1998; Hilgert *et al.*, 2003; Cude *et al.*, 2006; Robb and Sharpe, 2009), there is relatively little previous research that links financial literacy and financial well-being among college students. Surprisingly, some studies have not found a relationship between financial literacy and financial well-being among college students (Shim *et al.*, 2009). The limited research on this topic and the mixed results make it difficult to draw conclusions about the relationship between financial literacy and financial well-being. Thus, additional research is needed to examine the extent to which personal and family background, academic ability, childhood consumer experience, financial socialization, and financial literacy affect students' financial well-being.

Methods

Procedure

This study of financial literacy, attitudes, and practices was conducted in 2005-2006 among college students in Malaysia in public and private colleges. Colleges were selected for the study using a multi-stage sampling technique. For the first stage, a list of all public and private colleges was obtained, from which five public and five private colleges were randomly selected. In addition to the ten randomly selected colleges, University Putra Malaysia was included in the study to assist the researchers in planning educational programs. Within each college, 350 students were randomly selected using a list obtained from student affairs offices. A total of 3,850 questionnaires were distributed among the 11 colleges and 2,519 questionnaires were returned, for a 65 percent response rate (rates within the universalities ranged from 46 to 95 percent). The survey was written in the Malay language.

Sample

As shown in Table I, the majority ethnic groups in the sample were 75.6 percent Malay and 24.4 percent Chinese, which was comparable to national statistics for the overall population (65.9 and 25.3 percent, respectively; Malaysian Ninth Plan, 2006). The sample for this study consisted of 59.1 percent female and 40.9 percent male students. On average, respondents were 20.9-years old. Slightly more than half of the respondents (51.7 percent) were from rural areas. The sample consisted of more students attending public (60.9 percent) than private colleges. A majority of students lived on campus (72.5 percent). There was adequate representation of each student class, with 29.4 percent freshmen, 32.4 percent sophomores, 26.5 percent juniors, and 11.7 percent seniors. A majority of students reported a GPA in the 2.50-2.99 range (72.4 percent). More than half were not employed (59 percent) and nearly all were single (98.4 percent). Three-fourths of students' fathers had the equivalent of a high-school

Table I.
Sample characteristics

Characteristic	$n = 2{,}199$	%
Gender		
Male	899	40.9
Female	1,300	59.1
Ethnicity		
Malay	1,663	75.6
Chinese	536	24.4
Place of origin		
Rural	1,129	51.7
Urban	1,055	48.3
Type of college		
Public	1,340	60.9
Private	859	39.1
Student residence		
On-campus	1,585	72.5
Off-campus	600	27.5
Father education		
No formal education	45	2.2
Elementary	403	19.3
Secondary	918	44.0
College degree	601	28.8
Graduate	118	5.7
GPA (mean = 3.00)		
<2.50	525	23.9
2.50-2.99	1,590	72.4
>2.99	81	3.7
Class rank		
Freshman	620	29.4
Sophomore	683	32.4
Junior	560	26.5
Senior	247	11.7

education (78.5 percent) or better (28.8 percent college educated) and 55 percent report that their parents were married and living together, whereas 21 percent of parents were divorced.

We used listwise deletion so as to ensure a rectangular dataset in which there were no instances of missing data. Doing so made it possible for AMOS software to estimate modification index values that indicate the extent to which additional model components would reduce the lack of fit between the sample covariance matrix and the reproduced covariance matrix in the model. Results of the χ^2 goodness of fit tests, comparing the proportions of omitted and non-omitted observations for the categorical variables included in the model, show that there were no significant differences. Therefore, it is reasonable and valid to generalize from model results for the non-omitted data. For example, 44.4 percent of students not included in the model were male, compared to 39.9 percent of observations included in the model, $\chi^2(1, n = 2{,}199) = 3.10, p = 0.08$. Also, 29.2 percent of students not included in the model lived on-campus, compared to 27.0 percent of those included in the model, $\chi^2(1, n = 2{,}185) = 0.88, p = 0.35$.

Measures

Personal and family background. Personal and family background variables included gender, ethnicity, place of origin, student residence, type of college, and father's education level. Gender information was obtained from a single question asking students to identify themselves as female (1) or male (0). Chinese ethnicity was coded as 1 and Malay ethnicity, as the reference group, was coded as 0. Place of origin was coded 1 for those who were from an urban and 0 for those from rural area. Students who lived on campus were coded as 1; 0 for those who stayed off-campus. Type of college was coded 1 for those from public colleges and 0 for private colleges. Respondents were asked their father's highest education level; responses were coded as no formal education (0), elementary (1), secondary (2), college degree (3), and graduate education (4).

Academic ability. Academic ability consists of two variables; student academic achievement (GPA) and class rank. Self-reported (continuous) GPA was used to measure academic success. The number of a student's semesters in college was used to measure class rank.

Childhood consumer experience. Respondents were asked at what age they became involved in financial activities, which included having their own saving account, receiving an allowance, and discussing financial matters with parents. This childhood consumer experience measure was based on an instrument developed by Danes (1994). Response categories about when each of these financially related activities began were coded 0 (never), 1 ($<$7-12 years), or 2 ($>$13 years). Responses to these financially related activities were then recoded into two categories: never (0) and yes (1). Those who reported they began these activities either less than seven years ago, seven to 12 years ago, or $>$13 years ago were combined to represent the "experienced" childhood consumer, coded as 1. Only those who said they had never had a savings account, an allowance or financial discussions with parents were coded as 0.

Financial socialization. Financial socialization was measured by asking students to indicate how much socialization agents (i.e. parents, peers, school, media, and religion) influenced the way they learned about and how they behave with money management while at college (current life). A single item was used for each of these socialization agents. Responses were made on a scale from 0 (no influence) to 9 (very much influence).

Financial literacy. Financial literacy was a count of correct answers on a 25-item quiz about financial goals, making financial records, savings, investments, retirement, banking, time value of money, wills, insurance, education loans, and general knowledge of personal finance. The financial literacy test (instrument) was developed primarily for Malaysian college students in two stages. First, it was developed based on an extensive review of literature (e.g. Chen and Volpe, 1998, 2002). Second, to test for face and content validity of the developed instrument, researchers received input from ten Malaysian experts or practitioners in personal and family finance. The financial literacy index possessed adequate internal reliability, $\alpha = 0.70$.

Perceived financial well-being. Perceived financial well-being was measured using three items adapted from Hira and Mugenda's (1999a, b) measure of financial satisfaction: money saved, current financial situation, and financial management skills. Each item was measured by asking the respondents to indicate their level of satisfaction on a scale from 0 (completely dissatisfied) to 9 (completely satisfied). The α reliability for perceived financial well-being was 0.80.

Results

Correlations among observed variables

Table II presents the correlations among observed variables. The results were consistent with many of the associations predicted in the conceptual model. For example, financial literacy was significantly correlated with money saved ($r = 0.07$), current financial situation ($r = 0.06$), and financial management skills ($r = 0.09$). The highest correlations were found between items that were used to indicate the same latent variable (perceived financial well-being). For example, there was a stronger correlation between the money saved and current financial situation ($r = 0.72$). Taken together, the pattern and strength of the correlations among the observed variables provide a good basis for conducting additional tests related to the theoretical model.

Structural model testing

Statistical testing of the initially proposed structural model yielded the following indicators of the overall model ($\chi^2_{(43)} = 742.140$, $p < 0.001$, CFI = 0.824; IFI = 0.826; RMSEA = 0.086) suggesting that the model could be improved. During data analyses, the modification indices pointed to adding the path between parents' residual and religion's residual. It is reasonable to expect this relationship because parents and religion may have significant influence on each other (Figure 2).

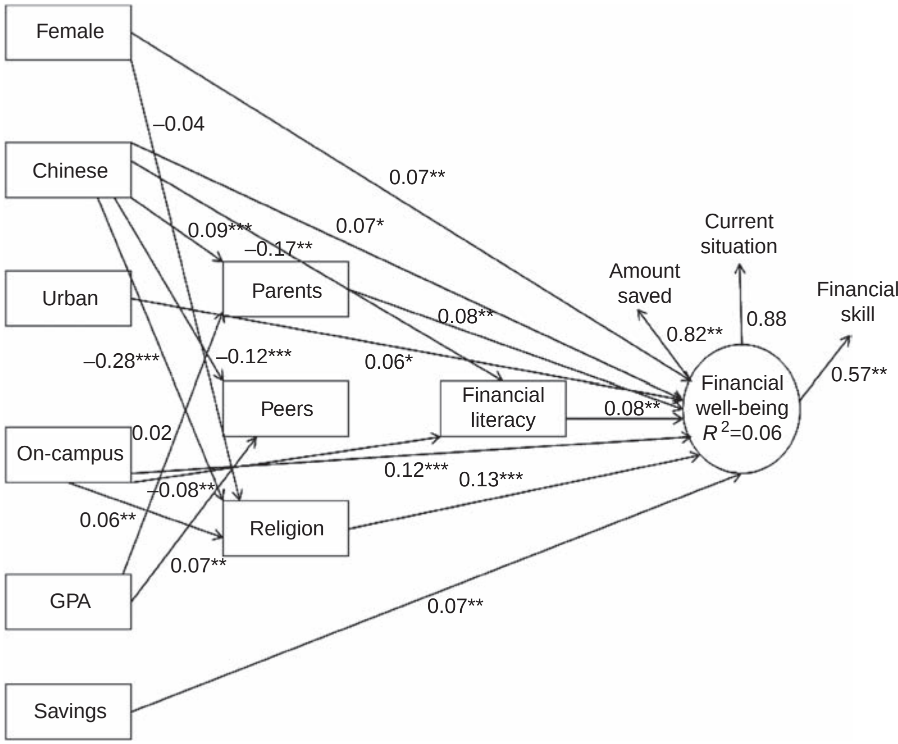
After adding this path, the fit of the adjusted model was better and deemed an acceptable fit ($\chi^2_{(42)} = 135.506$, $p < 0.001$, CFI = 0.972; IFI = 0.972; RMSEA = 0.036). Compared to the initial model, the overall fit of the adjusted model was improved as indicated by a significant reduction in χ^2 ($\Delta P(\chi^2) = 608.634$, Δdf = 1, $p < 0.001$). Consequently, this version was accepted as the final model.

The paths that were significant in predicting the influence of religion on financial socialization were ethnicity and students' residence. The negative and larger coefficient for ethnicity indicates that Chinese students ($\beta = -0.28$) were less likely to report having gained financial literacy from religious sources. However, students who lived on campus were more likely to report having learned financial literacy from religious sources than students who lived off campus. Ethnicity was found to be positive and significant in predicting parental influence on financial socialization. The results

Table II. Correlations, means, and standard deviations for observed variables in model

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Gender (1 = female)	–																			
Ethnicity (1 = Chinese)	−0.05	–																		
Place of origin (1 = urban)	−0.00	0.21	–																	
College types (1 = public)	0.08	−0.33	−0.17	–																
Residence (1 = campus)	0.07	−0.47	−0.12	0.46	–															
Father education	−0.01	−0.10	0.24	−0.11	0.10	–														
GPA	−0.09	0.09	0.02	0.06	0.03	0.06	–													
Class rank	−0.07	−0.12	−0.04	0.11	0.04	−0.00	0.34	–												
Allowance (1 = yes)	0.07	−0.01	−0.00	−0.01	0.02	0.06	0.01	0.03	–											
Savings (1 = yes)	−0.00	0.05	−0.03	0.02	0.07	0.03	−0.00	0.05	0.07	–										
Discuss (1 = yes)	0.01	−0.07	−0.02	0.06	0.08	0.03	0.06	0.08	0.09	0.04	–									
Parents	−0.03	0.09	0.06	0.02	−0.01	0.06	0.07	−0.03	−0.00	0.01	0.08	–								
Media	0.02	−0.07	0.02	0.04	0.01	0.04	0.02	0.01	−0.01	0.03	0.05	0.13	–							
Peers	−0.01	−0.11	−0.04	0.07	0.08	0.03	0.07	0.05	−0.00	0.04	0.03	0.17	0.38	–						
School	0.02	−0.11	−0.06	0.10	0.06	−0.05	−0.06	−0.01	−0.01	0.05	0.02	0.28	0.35	0.22	–					
Religion	−0.02	−0.30	−0.07	0.15	0.20	0.05	0.03	0.08	−0.03	0.05	0.06	0.46	0.22	0.17	0.42	–				
Financial literacy	0.02	−0.13	−0.04	0.07	0.02	−0.00	−0.00	0.03	0.03	0.04	0.09	−0.01	0.09	0.02	0.08	0.07	–			
Money saved	0.03	−0.01	0.04	0.04	0.10	0.10	0.03	0.00	0.02	0.04	0.02	0.13	0.07	0.02	0.02	0.14	0.07	–		
Current financial situation	0.08	−0.01	0.04	0.03	0.08	0.07	0.03	−0.02	0.00	0.04	0.03	0.11	0.04	−0.01	0.02	0.15	0.06	0.72	–	
Financial management	−0.01	−0.02	0.04	0.06	0.07	0.02	0.01	0.03	0.04	0.00	0.03	0.11	0.01	−0.04	0.06	0.14	0.09	0.47	0.50	–
Mean	0.60	0.24	0.48	0.61	0.73	2.2	2.4	3.7	0.96	0.99	0.70	5.4	3.9	5.0	4.7	4.5	11.8	4.1	4.3	4.6
Standard deviation	0.50	0.43	0.50	0.49	0.45	0.88	1.3	2.1	0.21	0.10	0.46	2.7	2.4	2.4	2.6	2.9	3.6	2.3	2.2	2.1

Notes: Correlations of magnitude 0.05 or greater were significant ($p < 0.05$). Numbers ranged from 1,826 to 2,199



Notes: Model fit: $\chi^2(42)$= 135.506, (p= 0.000); NFI= 0.960; IFI= 0.972; CFI= 0.972; RMSEA = 0.036; * = p<0.05; ** = p<0.01; *** = p<0.001

Figure 2.
The student perceived financial well-being model: the final structure equation model (standardized estimates)

suggest that parents were a more significant source of financial information among Chinese students compared to their Malay counterparts.

Ethnicity and GPA were significant in predicting the influence of peers on financial socialization. The negative coefficient for Chinese ethnicity indicated that they were less likely to learn financial literacy from peers compared to Malay respondents. Since Chinese students were more likely to learn financial literacy from their parents, perhaps this explains why they learned less from peers compared to their Malay counterparts. It seems that when it comes to financial matters, Chinese students were more likely to learn from their parents than friends. Those students who had greater academic achievement (higher GPAs) were more likely to have gained financial literacy from peers than students with lower GPAs.

Ethnicity and students' residence were linked directly and negatively to financial literacy ($\beta = -0.17$ for Chinese and $\beta = -0.08$ for on campus). The results indicated that Chinese students and those students who stayed on campus were less knowledgeable about personal finance. Chinese ethnicity had twice the effect of students' residence on financial literacy. However, none of the financial socialization agents had direct effects on financial literacy.

The paths in the model that are significant in predicting perceived financial well-being are financial literacy, parents, religion, savings, gender, ethnicity, place of origin, and students' residence. The direct effect of financial literacy ($\beta = 0.08$) on perceived financial well-being suggests that those students who had greater knowledge in personal finance were more likely to report higher financial well-being. The significant positive relationship between parent and religion as socialization agents suggest that the more students learned about finances (financial literacy) from their parents and from religious sources, the more likely students were to report they were satisfied with their perceived financial well-being. The influence of religion ($\beta = 0.13$) suggests that religion could be a more important source of learning about personal finance than parents ($\beta = 0.08$). Those who had savings accounts as children were more satisfied with their current perceived financial well-being compared to those who did not have that early experience. The results also indicate that having earlier experience in managing money could result in higher current perceived financial well-being. Among the significant personal and family background variables, students' residence had the strongest and largest effect on perceived financial well-being ($\beta = 0.12$) compared to ethnicity ($\beta = 0.03$). The results suggest that on-campus students tended to report they were more satisfied with their perceived financial well-being compared to off-campus students. Other significant paths revealed that being a female, of Chinese ethnicity, and a student from the city positively affected perceived financial well-being.

Discussion

The most revealing findings of our study are that students of Chinese ethnicity had a unique process of financial socialization as compared to those of Malay ethnicity. For example, students of Chinese ethnicity reported that their parents were more influential than peers or religion as financial socialization agents, regardless of the fact that previous research showed Chinese students (secondary school) were less likely to interact with their parents and peers compared to their counterparts (Kamaruddin and Mokhlis, 2003). One possible explanation is that most of the Chinese students come from financially well-off families and study at private colleges. Thus, they are more dependent on their parents for financial support and information. The results also imply that peers become a significant source of financial information among those students who have better academic records. There is no obvious reason to explain this relationship. It might be that these students spent most of their time with friends compared to other socialization agents; consequently, their peers become a more important source of help with financial decision making. Xiao *et al.* (2007) suggested that college peers may play an important role in students' financial practices. They found that students were more likely to engage in positive financial practices (e.g. cash management, credit management, and saving behavior) if the behaviors were approved by their peers.

It is apparent that Chinese students had lower levels of financial literacy compared to their Malay counterparts. This result was unexpected because previous studies have shown that Chinese students have higher mathematical achievement (Ismail and Awang, 2008) and that they know more about educational loans (Abu Bakar *et al.*, 2006).

It appears that gender, ethnicity, students' residence, and place of origin were associated with students' perceived financial well-being. Female students reported higher levels of financial well-being. Perhaps different socialization or personal expectations regarding money saved, current financial situation, and financial management skills explain the differences between male and female students in their reports of perceived financial well-being. Gender differences in attitudes about money may occur because parents socialize sons and daughters differently (Edwards *et al.*, 2007). Edwards *et al.* (2007) indicated that daughters were more open with their parents about their spending behaviors, more dependent on their parents for support, and more likely to talk with parents about their own financial situation. They suggested that parents may socialize daughters to be more dependent in two ways: first, parents may provide more real financial support to daughters than sons and second, parents may provide social support by listening to daughters who are more open with them about their financial situation, compared to sons. Past research supports the theory that the differences between college men and women in perceived economic well-being may be due to gender role socialization (Leach *et al.*, 1999; see also Gudmunson and Danes, 2011).

College students who lived on-campus were more satisfied with their perceived financial well-being then their off-campus counterparts. It is reasonable to suggest that this is because on-campus students probably have fewer financial responsibilities and liabilities than students living off-campus. For example, the costs associated with on-campus living (rent and utilities) are typically deducted from students' educational loans or scholarships whereas students living off-campus pay rent and utilities each month. A prior study by Masud *et al.* (2004) found that students living off-campus spent more money on living expenses such as rent, utilities, and gas compared to students on campus. The study also found that a higher percentage of students who live off campus reported experiencing greater financial problems compared to on-campus students.

Those students who come to college from the city also reported they were more satisfied with their perceived financial well-being than those students from rural areas. One possible explanation could be that those students are from families that are more financially well off. Well-off parents may provide their children with more financial support compared to less well-off parents. Past research shows that individual well-being is interdependent within a family; well-being reported by children, for example, is strongly correlated with parents' well-being (Winkelmann, 2005).

Contrary to our initial expectation, GPA and class rank had no direct effect on students' perceived financial well-being. This fits with the current literature, which has shown that GPA and class rank were not significant predictors of college students' financial well-being (Shim *et al.*, 2009; Xiao *et al.*, 2009). The results suggest that one's academic ability does not necessarily determine financial well-being. Other factors such as behavioral/cognitive biases, level of self-control, and financial socialization influences (e.g. peer, family, economic, community, and institutional) also can affect financial behaviors and financial well-being (Huston, 2010).

The influence of childhood consumer experience on perceived financial well-being is not mediated by financial socialization and financial literacy. There was no direct effect of savings on either financial socialization (parents, peers, and religion) or financial literacy. However, savings did directly impact college students' perceived financial well-being. In this study, there is evidence that experiences in managing money at a young age contributes to perceived financial well-being later in life. The results suggest that students' should start getting involved in financial activities early in life. This fits with the literature, which has shown that having financial experiences such as bank accounts and investment accounts had a positive effect on saving behavior (Kotlikoff and Bernheim, 2001). High school students with more financial experiences had higher savings rates than those with less experience (Peng *et al.*, 2007).

The present study adds credence to the notion that financial well-being can be improved or increased through social institutions such as churches. This is consistent with Shweder's (1991) assertion that religion is one of the most universal and influential social institutions and that it exerts a significant influence on people's attitudes, values, and behaviors at both individual and societal levels. Apparently religious background conveys values, beliefs, and faith about money.

Consistent with previous studies, our results also revealed that parents are a significant source of financial information for college students (Pinto *et al.*, 2005; Lyons *et al.*, 2006; Peng *et al.*, 2007). The results suggest that students who learned about family finance from their parents improved and increased their well-being in terms of money saved, current financial situation, and financial management skills. Equally important is the finding that financial socialization agents such as religion and parents specifically had direct effects on perceived financial well-being; financial socialization did not mediate this impact. In other words, these financial socialization agents have their own unique direct influence.

Financial literacy and financial well-being

Similar to past research, we found that financial literacy significantly influenced students' perceived financial well-being. For example, Joo and Grable (2004) indicated that financial literacy had a direct effect on financial well-being. Other studies by O'Neill *et al.* (2000) also noted that if consumers receive education in basic personal finance they may be in a better position to manage their finances, thereby resulting in improved financial well-being. Our results suggest that more knowledge of personal finances among students results in greater well-being in terms of money saved, current financial situation, and financial management skills.

There was no evidence that the influence of financial socialization on perceived financial well-being is mediated by financial literacy. None of the financial socialization agents (parents, media, peers, school, and religion) had a direct effect on financial literacy. The results were unexpected because previous studies have shown that children or students learned financial literacy from at least their parents (Pinto *et al.*, 2005; Lyons *et al.*, 2006; Peng *et al.*, 2007) even when no other agents were identified. In this study, only parents and religion had direct effects on perceived financial well-being; financial literacy also had a significant impact on financial well-being. The results suggest that the influence of financial socialization on financial well-being was not dependent on students' knowledge of personal finance.

Limitations

This study had several limitations. First, we relied exclusively on students' self-report, so the associations we have found might be in part due to a shared reporter variance. For this reason, future research should use multiple informants such as parents to achieve a better understanding of students' financial backgrounds. Parents could provide insights into the process by which they passed on knowledge and skills regarding financial issues during their child's early years. Second, this study relied on one item to assess the influence of socialization agents (parents, peers, school, media, and religion) on college students' financial awareness. While the question was similar to items used in other research, it is nonetheless important that more complete assessments be developed and used in future studies to tease out the influences of various socialization agents separately. For example, how frequently students discussed or observed their parents involved in money management activities would be an interesting topic. Third, we cannot confirm causal relationships among the variables because this study was based on cross-sectional data, not longitudinal data. Furthermore, there may be unobservable factors not specified in our model, which account for some of the moderation effects. Fourth, we assessed perceived financial well-being by using a subjective measure of the level of students' well-being. This cannot capture the objective financial well-being of students. Future studies should include both objective and subjective measures such as sources of income, amount of income, and students' debt to determine college students' actual financial well-being. Finally, the explanatory power of the model was quite low. However, the model fits rather well by most standard SEM, and high R^2 values might happen in different models. The present study tested specific theoretical propositions and thus was not motivated to find the model with the highest value of R^2 but rather was estimating a model to test the theory.

Conclusion and implications

It is apparent that positive childhood consumer experiences improve college students' perceived financial well-being. This should create awareness among parents, family, and students themselves about the importance of practicing good financial habits at home; specifically, at the appropriate age when children are ready to learn about money-related activities. Second, financial literacy can be increased through social institutions such as mosques and churches. Students should be encouraged by parents, teachers, and university instructors to learn about money management and practice good financial behavior in their daily lives. Providing basic knowledge on personal finance to school-aged children through the school systems would seem to be an effective approach to educating students to become responsible and prudent consumers. Third, the most revealing results of this study and those most consistent with previous studies are that perceived financial well-being can be increased through financial literacy. In other words, to ensure financial well-being, financial education should be made available to all school-aged children, college students, and parents.

These findings have implications for parents, university administrators, financial counselors, financial planners, educators, and students themselves. These findings could be used to develop financial education programs that would provide students with the knowledge and skills to better manage their finances and improve their financial well-being. Parents should begin discussing sound money-management practices with their children at a young age, continue it through adolescence, and reinforce with them that financial education is a life-long pursuit.

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