

Childhood Financial Socialization and Young Adults' Financial Management

Jinhee Kim and Swarn Chatterjee

The current study investigates the association between childhood financial socialization and financial practices and asset choices of young adults, using a nationally representative dataset. Results revealed that childhood financial socialization experiences were positively associated with the beneficial financial practices and financial asset ownership of respondents in young adulthood. Financial outcomes were found to vary by types of parental socialization. Respondents who owned bank accounts and had their spending monitored by parents in childhood were more likely to own financial assets and had more positive attitudes toward personal finance as young adults.

Key Words: asset ownership, financial competence, parental financial socialization, transitioning adulthood

Introduction

Researchers, educators and policymakers are working on strategies to improve the financial literacy of young Americans who often enter adulthood with a limited knowledge of credit, insurance, and other financial products, and have little experience managing their personal finances (Danes & Hira, 1987; Lusardi, Mitchell, & Curto, 2010). The effect of factors, such as employment, financial education, and socioeconomic status, on the financial practices of transitioning adults, have been extensively studied (Asinof & Chaker, 2002; Baek & Hong, 2004; Baum & O'Malley, 2003; Joo, Grable, & Bagwell, 2001; Lyons, 2004; Shenk, 1997), and socialization theories have also been applied to financial socialization. However, limited information is available about the process of financial socialization. A few studies determined different effects of socialization domains on the financial attitudes and behaviors of individuals (Jorgensen & Salva, 2010; Kim, LaTaillade, & Kim, 2011). Financial socialization is how these young adults develop their financial values, attitudes and behaviors that foster their financial independence and subsequently facilitate their successful transition into adulthood. Several previous studies have relied on surveys of college students and have focused on the career and educational consequences of financial socialization of young adults (Asinof & Chaker, 2002; Jorgensen & Salva, 2010; Lyons, 2004; Shenk, 1997). This paper extends the litera-

ture by using a nationally representative dataset, collected over two years, of young adults transitioning to adulthood to empirically examine the various factors leading to financial socialization and its related financial outcomes for young adults. The current study includes the general population of young adults between 18 and 21 who may or may not be attending college. In addition, previous literature has primarily focused on credit card uses of college students; we add to these findings by also examining the financial capabilities concerning asset ownership and the savings characteristics of young adults.

The purpose of the current study was to examine the predictors of financial attitudes and practices of the youth who are transitioning into adulthood (ages 18 to 21) using data from the Transition to Adult 2005 Supplement, the Panel Study of Income Dynamics (PSID, 2005) and the Child Development Supplement II (CDS, 2002/2003). This paper reports how individual and family variables, drawn from the two PSID supplements, influence the financial attitudes and practices of young adults. Specifically, this paper reports the extent to which the family processes, such as parental warmth, parental financial monitoring and parental financial communication, and individual and parent factors affect their financial behaviors (asset ownership, debt, and financial responsibility) and financial attitudes (financial expectations, financial anxiety, and perceptions of own financial management).

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Review of Literature

Financial literacy and competence among young adults in the United States has received much attention in recent years. In their transition to adulthood, young adults face increasingly complex financial transactions such as managing credit card debt, obtaining and paying car loans, obtaining and beginning to repay student loans, managing health care and insurance costs, and savings. Growing numbers of young adults are struggling with such transactions, as indicated by the increasing numbers of young adults who report rising financial debt and bankruptcy filing (Ensign, 2012; Rohrke, 2002). Research on the financial practices and credit card behavior of college students suggests that although most students manage their personal finances responsibly, the number of students who get into financial difficulties because of poor personal financial management skills is increasing (Baek & Hong, 2004; Baum & O'Malley, 2003; Joo et al., 2001; Lyons, 2004). Proficiency in financial skills is crucial for young adults to achieve financial wellbeing over their lifetime (Chen & Volpe, 2002; Lusardi, Mitchell, & Curto, 2010). However, most young adults do not have the financial literacy necessary to responsibly make basic financial decisions (Chen & Volpe, 2002; Hira, 1993; Lusardi, 2008; Mandell, 2008; Mandell & Klein, 2007; O'Neill, 1993).

Developmental Contributors to Young Adults' Financial Competence

According to individual and family life cycle theories (McGoldrick & Carter, 1999), one of the key tasks in the transition to young adulthood is gaining financial independence. The development of financial independence among young adults is often associated with acquisition of financial skills and resources, including obtaining post-secondary education and employment, establishing and maintaining checking and saving accounts, and acquiring assets. These skills facilitate financial literacy and competence as young adults obtain earned income and incur financial obligations that are traditionally associated with adulthood such as paying rent and other bills (Destin & Oyserman, 2009; Whittington & Peters, 1996). Young adults themselves appear to recognize the importance of financial self-sufficiency and cite this as one of the top three criteria for becoming an adult (Arnett, 2000). However, the process by which young adults acquire the skills and resources to become financially independent is not well known and has not been a traditional focus of developmental theories thus far (Shim, Xiao, Barber, & Lyons, 2009).

Family life cycle and developmental theorists posit that a successful transition to the next life cycle stage is dependent largely on achievements and skills acquired in previous stages (McGoldrick & Carter, 1999). Following from this developmental framework, the acquisition of financial skills and practices in childhood and adolescence may be presumed to aid the young adult in successfully meeting the financial demands associated with the transition to adulthood (e.g., economic self-sufficiency, self-regulation and delayed gratification). Research from the literature on family and consumer economics has found several factors linked to financial literacy in children and adolescents that may serve as developmental precursors to financial competence in young adulthood.

Childhood Factors

Knowledge of the adult economic world (e.g., money, possession, wealth, supply and demand, pricing and profit) is dependent in part on the development of mathematical conceptual understanding and problem-solving ability (Beutler & Dickson, 2008; Webley, 1996). Mathematical ability, or numeracy, has been linked to the ability of children to develop and maintain a savings plan (Lusardi, 2008) and is associated with future financial investments such as stock ownership (Christelis, Jappelli, & Padula, 2010) and assets (McArdle, Smith, & Willis, 2009). In her work as a welfare advisor, Caunt (2001) found that a lack of numeracy awareness, coupled with an inability to understand financial concepts such as annual percentage rate (APR), often resulted in the debt experienced by many of the consumers she served. Acquisition of mathematical skills and problem-solving abilities in childhood is likely to influence the development of financial management skills in adolescence and young adulthood.

Adolescent Factors

Graduation from high school, post-secondary education, and obtainment of a college degree have all been associated with greater financial knowledge and savings behavior in young adulthood (Cole & Shastry, 2009; Lusardi et al., 2010). Education was positively associated with financial behaviors such as savings, investing (Bertaut & Starr-McCluer, 2001; Cole & Shastry, 2009), and portfolio management (Campbell, 2006).

Participation in the workforce is common during adolescence (Mortimer, Harley, & Staff, 2002), and researchers have explored the positive and negative effects of employment on adolescent development for more than two decades (e.g., Greenberger & Steinberg, 1986). Two de-

velopmental perspectives, work benefits and work consequences, have been utilized to clarify the nature of this debate (Bauermeister, Zimmerman, Barnett, & Caldwell, 2007; Bauermeister, Zimmerman, Gee, Caldwell, & Xue, 2009). The work benefits perspective hypothesizes that the entry of young adults into the labor force contributes to the development of a positive adult identity through opportunities for future gainful employment and financial independence, monetary competence, personal responsibility, and exposure to adult financial roles as they obtain earned income (Abramovitch, Freedman, & Pliner, 1991; Bauermeister et al., 2009; Beutler & Dickson, 2008; Irwin, Burg, & Cart, 2002). Conversely, the work consequences perspective suggests that youth employment may be harmful to the academic and social development of adolescents by distracting them from scholastic and extracurricular activities and encouraging the adolescent to prematurely transition to adult roles for which they may not be ready (Bauermeister et al., 2009). This situation may especially be the case for youth who work over 20 hours per week, as such work hours have been associated with increasing divestment from education and involvement in health-compromising behaviors, such as alcohol and cigarette use (Johnson, 2004).

Engagement in various types of risky behavior, including most types of substance use, tends to peak between the ages of 18 and 25, during the transition to young adulthood (Raveis & Kandel, 1987). Several researchers have proposed that experimental or occasional substance use, particularly use of alcohol and cigarettes, in adolescence may be described as normative for this period (e.g., Baumrind, 1991; Chassin, Pitts, & Prost, 2002), and reflective of the process of identity formation, a salient developmental task for adolescents (Erikson, 1963). While experimental substance use may be considered by some to be a normative activity during adolescence, continued use into young adulthood has been linked to adverse financial outcomes, including divestment of funds for basic necessities to support the cost of chronic substance use and taking out high-interest instant loans to support purchases of alcohol and cigarettes (Autio, Wilska, Kaartinen, & Lähteenmaa, 2009; Siahpush, Borland, & Scollo, 2003).

Parent and Family Factors

Multiple investigations have documented the positive association of parent socioeconomic status with positive financial outcomes in childhood and young adulthood (e.g., Destin & Oyserman, 2009; Shanks, 2007). Parents with college and graduate degrees (Shanks, 2007) and financial

resources (e.g., wealth, savings, and income) can provide more resources that increase human, social, and financial capital for the developing child (Conger & Dogan, 2007) and foster positive financial practices and asset acquisition in young adulthood through parental access to financial institutions (Destin & Oyserman, 2009; Johnson & Sheraden, 2007). Parental wealth and assets appear to not only foster resources and skills that contribute to financial independence (e.g., post-secondary educational attainment, establishment of independent checking and saving accounts) but may also buffer against negative socioeconomic outcomes such as dropping out of high school (Destin & Oyserman, 2009). Similarly, financial difficulties can have an adverse effect on the emotions, behaviors, and beliefs of parents, which in turn can negatively influence their parenting practices and socialization strategies (Conger & Conger, 2002).

Schoeni and Ross (2005) found that, during their transition to adulthood, many young adults depended on financial support from their parents due to the period of early adulthood becoming more protracted. Furstenberg, Ruben, and Settersten (2005) argued that young adults who lacked the needed supports from family to make a successful transition to adulthood are vulnerable. Further, parents who own stocks were more likely to provide their children with financial information and discuss their experiences in the financial market. Parental education not only influenced parental resources available to their children but was also associated with parent-child interactions about finances and spending (Anderson & Newitte, 2005).

Transition to Adulthood and Parent Financial Socialization

Although the research literature on young adult financial practices has tended to focus on variables at the individual level, family relationships and dynamics between parents and their children are key processes by which children and adolescents learn sound financial practices and other skills needed to negotiate a successful transition to young adulthood (Kalil, Ziol-Guest, & Coley, 2005). Financial socialization is the process by which young people acquire the standards, values, norms, skills, knowledge, and attitudes needed to become functioning consumers in the marketplace (Lueg, Ponder, Beatty, & Capella, 2006; Rettig & Mortenson, 1986). Parents are considered the most influential agents of socialization in their children's lives. According to Allen (2008), "Parental [financial] socialization instruction generally involves (a) modeling consumer behaviors, (b) making rules about

children's consumer behaviors, and (c) engaging in direct discussions about purchasing decisions, money, credit, and related topics" (p. 352).

Theorists have drawn upon social learning perspectives to explain the influence of financial experiences in one's family of origin on financial attitudes and practices in young adulthood. According to the parental socialization hypothesis, parental behaviors (e.g., parental monitoring of child behavior, discipline practices) and emotional responses to financial situations (e.g., positive and negative expressions of parental affect) predict the financial outcomes of adult children, including their financial attitudes (e.g., financial anxiety, financial hopes, and future expectations), financial practices (e.g., fiscal responsibility), and acquisition of assets and debts (Conger, Cui, Bryant, & Elder, 2000). A recent study of college students found that parental influences had significant effects on the financial attitudes and behaviors of young adults (Jorgensen & Salva, 2010). Effective parents often monitor, communicate, establish and maintain rules and guidance regarding financial attitudes and practices with their children in order to foster future adaptive financial practices. In addition, the emotional climate in which parents socialize their children on financial matters appears to be important in promoting adaptive financial practices. Warm parent-child relationships foster motivation to comply and cooperate with parents, through positive affect toward and identification with them (Grusec, Goodnow, & Kuczynsk, 2000; Laible & Thompson, 2007). High levels of parental warmth can foster positive affect within the parent-child dyad, which in turn enhances the children's attentiveness and receptiveness to parental requests and socialization practices (Dix, 1991; Kochanska, 1995; Laible & Thompson, 2007), as well as positive gains in financial socialization (Pliner, Freedman, Abramovitch, & Drake, 1996). Parents' inability to provide warmth and comfort during difficult financial periods could also facilitate the development of financial worry in childhood and subsequently foster reluctance in young adulthood to seek financial and emotional support during times of crisis.

Previous investigations have confirmed that parental socialization and instruction in financial matters exert a positive influence on a child's efforts to acquire adaptive financial knowledge, skills, and attitudes (e.g., Jorgensen & Salva, 2010; Kim et al, 2011; Moschis, 1987; Shim et al., 2009). However, few investigations have examined the influence of parent socialization practices on the development of financial competence in young adulthood (Shim et al., 2009).

Results from a cross-sectional investigation of college students indicated that discussions with parents about financial matters during childhood were positively associated with confidence regarding the individual's own financial knowledge (Shim et al., 2009). A recent study of college students revealed that parental influences, such as discussion and direct learning, were positively associated with financial attitudes and behavior (Jorgensen & Salva, 2010).

Sources of Variation in Young Adults' Financial Competence

Several demographic factors have been associated with the development of financial competence among young adults. The young adult's gender and ethnic or cultural background may enhance early socialization and understanding of economic concepts. Female children and young adults are more likely to receive consumer-oriented training from parents and to describe their parents as more approachable during financial conversations (Allen, 2008). However, female college students were less knowledgeable about personal finances (Chen & Volpe, 2002), often borrow at higher costs, and are less likely to participate in the financial market (Lusardi, 2008). Although young adults across different racial and ethnic groups may be similar in developmental understanding of mathematical and numeracy concepts, there may be differences between groups regarding more complex financial concepts due to racial and ethnic variations in experienced economic and social conditions during their formative years (Beutler & Dickson, 2008). In addition, the residential status of young adults (i.e., whether or not they reside with their parents) may also affect attainment of financial independence (Whittington & Peters, 1996).

Hypotheses of the Current Study

The purpose of the current study was to examine factors that explain young adults' financial attitudes and practices.

Four hypotheses were identified:

- H₁: Financial asset ownership will be influenced by the respondents' childhood financial socialization, mathematical problem-solving ability and educational attainment. These associations will be significant even after controlling for a number of socioeconomic, demographic, and family-level variables.
- H₂: The debt of young adults will be influenced by the childhood financial socialization, mathematical problem-solving ability and educational attainment of the respondents.

These associations will be significant even after controlling for a number of socioeconomic, demographic, and family-level variables.

H₃: Money management will be positively associated with childhood financial socialization, maturity (age) and employment experience. These associations will be significant even after controlling for a number of socioeconomic, demographic, and family-level variables.

H₄: Financial attitudes (perception of financial management ability and financial worry) will be negatively associated with financial socialization, parents' socioeconomic status and mathematical problem-solving ability. These associations will be significant after child- and family-level variables are controlled.

Method

Data

The current study used the Panel Study of Income Dynamics (PSID) data to examine predictors of financial attitudes and practices among young adults. This study drew information on young adults aged 17 to 21 from the PSID Transition to Adult 2005 Supplement, the Panel Study of Income Dynamics (PSID, 2005), and the Child Development Supplement II (CDS, 2002-2003). The PSID is a longitudinal study of a nationally representative sample of U.S. men, women, children, and the families in which they reside. For approximately the past four decades, the researchers have collected annual data from these families and individuals about their demographic, economic, and employment behavior.

The present study included the 2002 CDS-II data from the Child Interview, Child Assessment, Primary Caregiver Household and Primary Caregiver Child files. The childhood socialization variables and the variables related to the respondents' mathematical problem-solving abilities were drawn from the CDS supplements. The present study also included the transition to adulthood (TA) supplement from 2005. The TA supplement included 745 young adults aged 17 and over. For the purpose of this study, respondents who were in high school or less than 18 years of age were excluded. As a result, the sample size for this study was 628. The variables related to the financial attitude and money-management practices of young adults were taken from the TA supplement. This paper includes how individual and family level variables, drawn from the main PSID and the two PSID supple-

ments, influence the financial attitudes and practices of young adults.

The dependent variables used for empirically testing our hypotheses included financial asset ownership, debt management, money management, and financial attitudes related factors. Financial asset ownership was coded as "1" if the respondent had any bonds, CDs or other non-bank account related liquid assets and "0" if otherwise.

The debt management variables that were tested included having a credit card balance (coded as "1" if the respondents carried any revolving credit balance and "0" if otherwise), the log transformed values of total debt, and non-school and school-related debts. Log transformation was used to account for any potential non-linearity present in the variables (Wooldridge, 2009). For financial practice, the variable was coded as "1" if the respondents had full responsibility for managing their finances and "0" if otherwise. Financial attitude variables included financial worry (dummy variable coded as "1" if the respondents had daily worries about their financial situation and "0" if otherwise) and the respondents' perception of their ability to manage money (dummy variable coded as "1" if the respondent reported managing money extremely well and "0" if otherwise).

Demographic Factors

The respondents' age and gender were self-reported. One dummy variable was used to indicate the gender of the respondent (1, 0), with the omitted category being female. A dummy variable was used to indicate whether or not the respondent was employed (1, 0). The race/ethnicity variable included in the study was coded as "1" if the respondent was White and "0" if otherwise. Respondents below 18 years of age or respondents currently attending high school were dropped from the analyses of this study. Binary variables for full-time and part-time college attendance were included in the model. These respondents were compared against the reference group of respondents that did not attend college.

Mathematical problem-solving ability

This variable was measured using the Applied Problems subtest of the Woodcock-Johnson Revised Tests of Achievement for Reading and Math (Woodcock & Johnson, 1989). Respondents were coded as "1" if living with their parents and "0" if they lived away from their parents. Mathematical problem solving was indicated by a standardized score that ranges from 0 to 200, with a mean

score of 100 reflective of basic knowledge, and scores higher than 200 indicative of greater mathematical skill in solving applied problems. Mathematical problem solving came from the Child Assessment file and other variables came from the CDS-II Child Interview file.

Childhood socialization variables

The socialization variables were obtained from the CDS-II childhood interview supplement. The socialization variables included parental warmth, allowance, monitored spending, parental communication about donations, and having savings accounts. Parental warmth is a seven-item scale developed by Child Trends for use in measuring the warmth of the relationship between child and parent. The questions, asked of the parent about the child, determine how often the parent told the child they love him or her, spent time with the child, told the child they appreciated what she or he did, and talked with the child about her or his interests, relationships, day, and current events. The response categories ranged from 1 (not in the past month) to 5 (every day). A scale was created by summing the number of behaviors that the parent reported that they did with the child in the past month. Scale reliability was 0.79.

Parental financial monitoring was a single-item measure that asked the child about his or her parent's knowledge of how the child spends his or her money. The response categories ranged from 1 (never) to 5 (almost always).

Parent-child interactions about money were measured by two variables: child allowance and parent communication about child donations. Child allowance was a dummy variable indicating whether or not the child was given an allowance (1, 0). Parent communication about child donations was measured by a single-item dummy variable asking whether or not the parent talked with the child about donating his or her money to a religious or other charitable organization (1, 0).

Parental factors included father's education, parental income, net worth, and stock ownership. These variables were taken from the 2005 PSID core surveys. Father's education was the father's number of years of education. Parental income and net worth variables were included in the model to control for the socioeconomic status of the respondent's family. Parental stock ownership (1, 0) was also included in our model.

Analysis

Binary logistic regression analyses were used to predict categorical outcomes, including financial asset ownership,

full financial responsibility, credit card balance, financial worry, and the self-reported ability to manage money well. Binary logistic regressions were appropriate for estimating parameters of dichotomous dependent variables (Kennedy, 1994). We used OLS regression analysis for estimating the log of total debt, school-related debt, and non-school related debt.

Results

Descriptive statistics for the variables in the estimation are presented in Table 1. The *t*-test results showed that average mathematical problem-solving scores were significantly higher for respondents who had financial assets and did not have full financial responsibility and were lower for those who reported financial anxiety. A significantly higher percentage of respondents with financial assets, credit card balances, and responsibility for managing their finances reported being employed. Conversely, significantly lower proportions of transitioning adults living with their parents reported having financial asset ownership and credit card balances. However, a higher proportion of respondents who lived with their parents reported that they did not have full responsibility for managing their own finances.

Parental net worth, income, and stock ownership were significantly higher for respondents with financial asset ownership, credit card balances, and no financial responsibility. Parental net worth and stock ownership were also higher for respondents who reported having no financial worries.

Overall, childhood socialization was found to be positively associated with financial asset ownership, lack of financial anxiety, and credit card debts. Among the childhood socialization variables, we observed from the descriptive statistics that a significantly higher percentage of those who received an allowance from their parents carried a credit card balance, were less worried about their finances, and had full responsibility for managing their finances. Similarly, a higher percentage of respondents with savings accounts, or who had learned about helping others with money from their parents, had financial assets and were less worried about their financial situation. Additionally, a higher percentage of respondents who had savings accounts as children reported currently carrying a credit card balance. A greater proportion of those respondents whose parents monitored their spending in childhood had financial assets, were less worried about their finances, and did not currently have full responsibility for managing their finances.

Financial Asset Ownership

The logistic regression results for the financial asset ownership of transitioning adults are reported in Table 2. Hypothesis 1 was partially supported. Childhood financial socialization, mathematical problem-solving ability, and educational attainment were significant after controlling for socioeconomic, demographic, and family-level variables. Financial asset ownership was positively related to employment status and parental income as well as net worth. White respondents were also more likely than others to have financial assets. Owning savings accounts as a child and having parents who monitored spending in childhood were positive predictors of financial asset ownership during young adulthood.

Debt Management

The logistic regression results for carrying credit card balances by transitioning adults are reported in Table 3. We controlled for demographic factors, parental factors, and childhood socialization-related factors in this model. Hypothesis 2 was not supported. Educational attainment and mathematical problem solving ability were not significant, while parental warmth was moderately significant ($p < .10$). Having a credit card balance was negatively associated with being male. Respondents whose parents owned risky assets (stocks) were more likely to carry a credit card balance. Receiving greater parental warmth as children was negatively associated with carrying credit card balances among the respondents.

The results for log transformed values of the amounts of debt for transitioning adults are reported in Table 4. We ran three sets of these models to examine total debt (columns 1-4), debt due to school-related expenses (columns 5-8), and debt due to non-school related expenses (columns 9-12). Hypothesis 2 was not supported in terms of amount of debt. Attending college full time was positively associated with the amount of total debt and college-related debt, and attending college part-time was positively associated with the amount of total debt. Living with parents was negatively associated with having higher levels of total debt and college-related debt. Age was positively associated with carrying higher levels of non-school related debt. Conversely, being male was negatively associated with carrying total debt and non-school related debt. Being employed was positively associated with the amount of non-school related debt among the respondents. Additionally, none of the parental economic factors were associated with the amount of debt holdings.

Money Management

The logistic regression results for the money management practices of the respondents are reported in Table 5. We ran three sets of these models to examine the responsibility of managing one's own finances (columns 1-4) and the respondent's perception of being a good manager of money (columns 5-8). Hypothesis 3 was supported. Financial socialization, age, and employment were significantly associated with the responsibility of money management. Savings account ownership in childhood and learning about charitable donations from parents as a child were positively associated with managing one's own money as a transitioning adult. Conversely, receiving greater parental warmth as a child was negatively associated with managing one's own finances among the respondents. Respondents who were older, male, and employed were found to be more likely to manage their own finances. Respondents whose parents owned risky assets (stocks) were less likely to be responsible for managing their own money.

Financial Attitudes

The logistic regression results for perception of money management ability and financial worry are reported in Table 5. Hypothesis 4 was partially supported for the perception of being good at money management. Financial socialization factors were significant, while age and employment were not. Receiving parental warmth as a child was negatively associated with the perception of being good at managing one's money. Conversely, those respondents who had their spending monitored by their parents when they were children were significantly more likely to report being good at managing their own money. Parental income was a negative predictor of the perception of being good at managing one's finances. Perception of being good at managing one's finances had a positive association with being male and living with one's own parents. Hypothesis 4 was supported for financial worry. Financial socialization factors, parents' socioeconomic status, and mathematical problem-solving ability were significantly associated with financial worry. Respondents who received an allowance as a child and those who had their spending monitored by their parents were less likely to be financially worried. Results showed that respondents' financial worry was negatively associated with parents' net worth. Being White and father's education were positively associated with financial worry. Higher levels of problem solving ability were also significantly related to financial worry.

Table 1A. Descriptive Statistics (N = 624)

	Variable	M	SD	%	t-tests		t-tests	
					1 = Own liquid assets	0 = No liquid assets	1 = Carry balance	0 = Do not carry balance
Young adults' characteristics	Age	19.2	0.09		19	19	19	19
	Gender (male = 1)			53	45	51*	43	48
	Never married			85.5	86	86	85	87
	Race White			48.1	60***	20	47***	61
	Attending college			53.3	63***	23	68***	46
	Problem solving score	103.1	0.91		104***	91	102	104
	Employed			49.3	52***	37	58***	42
	Live with parents			60	55	67***	54	64**
Parental factors	Father's education (1 - 17)	11.5	0.301		11.6***	8.4	11.01	10.9
	Parental net worth 2005	\$327,938	\$73,562	Log:	10.3***	7.24	10.2***	9.2
	Parental income 2005	\$81,913	\$4,534	Log:	11***	10.2	11.1***	9.7
	Parental stockownership			24.5	29***	7	32***	21
Childhood socialization	Received allowance			28	24	24	27*	24
	Savings account			57	71***	30	74***	52
	Parent monitored spend			50	84**	71	84	83
	Parental warmth (0 - 35)	27	4.3		26**	24	25.8	25.6
	Worked for pay			30	33**	22	41***	24
	Parents taught donation			59	77**	68	77	74
Assets and debt	Liquid assets			59				
	Carry credit card debt			39				
	Total card debt	\$2,323.00	\$9,621					
	School related	\$1,678.00	\$5,928					
	Non-school related	\$648.00	\$7,591					
Financial practice	Full fin. responsibility			60.9				
	Good money manager			49.5				
	Have financial worry			52.9				

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 1B. Descriptive Statistics (N = 624)

Variable	M	SD	%	t-tests (TA050065 >= 4)		t-tests	
				1 = Fin. anxiety	0 = No fin. anxiety	1 = Fully responsible	0 = Not fully responsible
Young adults' characteristics							
Age	19.2	0.09		19	19	19	19
Gender (male = 1)			53	46	48	48*	37
Never married			85.5	84	90***	87	87
Race White			48.1	50	50	55	55
Attending college			53.3	49	57**	48	61***
Problem solving score	103.1	0.91		101	105*	102	108***
Employment							
Employed			49.3	48	47	57***	37
Live with parents			60	58	60	56	62**
Parental factors							
Father's education (1 - 17)	11.5	0.301		11	10.9	10.1	11.6**
Parental net worth 2005	\$327,938	\$73,562	Log:	9.05	10.1***	9.2	10.02***
Parental income 2005	\$81,913	\$4,534	Log:	10.8	10.8	10.7	10.9***
Parental stockownership			24.5	22	28*	20	30***
Childhood socialization							
Received allowance			28	21	33***	31**	24
Savings account			57	55	64**	60	60
Parent monitored spend			50	79	84**	79	86**
Parental warmth (0 - 35)	27	4.3		25.5	25.8	24.3	26.6***
Worked for pay			30	31	27	34***	21
Parents taught donation			59	71	78**	75	75
Assets and debt							
Liquid assets			59				
Carry credit card debt			39				
Total card debt	\$2,323.00	\$9,621					
School related	\$1,678.00	\$5,928					
Non-school related	\$648.00	\$7,591					
Financial practice							
Full fin. responsibility			60.9				
Good money manager			49.5				
Have financial worry			52.9				

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2. Financial Asset Ownership (N = 628)

Variables	Have financial assets	<i>b</i>	<i>SE</i>	<i>Odds</i>	
Demographic	Age	0.003	0.131	1.003	
	Male	-0.392	0.274	0.676	
	White	0.679***	0.114	3.188	
	Full-time college student	0.369***	0.034	2.054	
	Part-time college student	0.192**	0.446	1.341	
	Live with parents	-0.184	0.278	0.831	
	Problem solving	0.006***	0.001	1.006	
	Employed	0.286***	0.041	1.392	
	Parental	Father's education	0.017	0.099	1.017
		Log parental income	0.433***	0.141	1.543
Log net worth		0.075**	0.031	1.078	
Parent stockowners		0.284	0.382	1.386	
Childhood socialization	Receive allowance	-0.063	0.278	0.940	
	Saving account	0.191***	0.028	1.339	
	Parental warmth	0.011	0.025	1.011	
	Monitored spending	0.136**	0.049	1.145	
	Learned about donation	0.077	0.266	1.080	
	Intercept	-4.071***	0.285		
	Pseudo <i>R</i> ²	0.334			
	<i>X</i> ²	234			

p* < .01. *p* < .001.

Discussion

Researchers have found that financial literacy is not prevalent among young adults (Lusardi et al., 2010; Mandell, 2008) and the present study extends the literature regarding the financial management practices of young adults. Very early in the life cycle (average age of 18.9), almost one third of young individuals carry credit card balances. About a quarter are unbanked, while half do not feel confident about their financial management skills.

The findings suggest that some childhood socialization variables influence the financial attitudes and behaviors of young adults. However, differences were found in financial outcomes by types of socialization domain. Giving an allowance itself may not be the most effective socializa-

tion process to develop financial behaviors. Some previous studies found that giving an allowance promotes the child's development of financial management (Abramovitch, Freedman, & Pliner, 1991), while others found that allowances had no or negative effects on adolescent money management and financial decision making (Marshall & Magruder, 1960; Miller & Yung, 1990). Results of the current study indicate that not having an allowance during childhood is positively associated with financial anxiety among young adults. Similarly, a previous study finds that children who did not receive allowances were more likely to worry about money as young adults compared to others (Kim et al., 2011). It seems that the association continues through young adulthood regardless of parental and individual factors.

Table 3. Carrying Credit Card Balance (N = 629)

Variable	Carry balance	<i>b</i>	<i>SE</i>	<i>Odds</i>
Demographic	Age	0.192	0.145	1.212
	Male	-0.605*	0.302	0.543
	White	0.195	0.376	1.214
	Full-time college student	0.108	0.129	1.109
	Part-time college student	0.671	0.578	1.955
	Live with parents	-0.272	0.328	0.763
	Problem solving	0.004	0.009	1.004
Parental	Employed	0.158	0.196	1.171
	Father's education	0.058	0.078	1.062
	Log parental income	-0.264	0.177	0.768
	Log net worth	-0.029	0.043	0.979
Childhood socialization	Parent own stocks	0.192*	0.082	1.212
	Receive allowance	0.053	0.318	1.055
	Saving account	0.202	0.227	1.224
	Parental warmth	-0.022*	0.009	0.977
	Monitored spending	0.002	0.108	1.002
	Learned about donation	-0.108	0.306	0.898
	Intercept	-2.949***	0.371	
	Pseudo <i>R</i> ²	0.192		
	<i>X</i> ²	71.4		

p* < .05. **p* < .001.

Owning a savings account as a child seems to be associated with financial asset ownership among young adults. The benefits of having a savings account have been advocated by a number of researchers (Curley & Sherraden, 2000; Elliott & Beverly, 2010; Johnson & Sherraden, 2007; Peng, Bartholomae, Fox, & Cravener, 2007). Those with savings accounts during childhood were more likely to own financial assets beyond bank accounts than those without. Savings accounts for children can be an effective starting point to build assets. Additionally, those who owned savings accounts as a child were also more likely to be responsible for managing money. This finding supports the positive effects of owning a bank account on investment knowledge found by Peng et al. (2007) with college alumni samples. However, owning savings accounts did not affect credit

card management and financial attitudes. This finding may suggest that parents must discuss and teach about credit specifically to have positive impacts on the credit card management of young adults. This conclusion is important, as a number of studies identified the credit problems of young adults (Lyons, 2004; Lyons & Hunt, 2003). Parental warmth has shown modest negative associations with stock ownership, carrying credit card balances, responsibility for managing money, and perception of money management. Except for carrying credit card balances, these results are not very positive for the financial management of young adults. In general, affective closeness with parents increases when children move from adolescence to young adulthood (Aquilino, 1997; Bucx & Van Wel, 2008; Rossi & Rossi, 1990). Such parental closeness may facili-

Table 4. Debt Management (N = 629)

Variables	Debt Management	Log (total debt)		Log (debt due to school)		Log (debt non-school related)	
		<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Demographic	Age	0.235	0.182	0.989	0.730	2.316***	0.644
	Male	-0.548*	0.284	-1.231	1.335	-2.503*	1.152
	White	0.631	0.372	-1.982	1.669	-1.032	1.531
	Full-time college student	1.382***	0.304	1.814***	0.458	1.124	0.522
	Part-time college student	1.024*	0.574	0.834	0.622	0.684	0.591
	Live with parents	-4.132***	1.132	-5.635***	1.326	-0.982	1.449
	Problem solving	0.018	0.023	0.014	0.018	0.032	0.030
	Employed	0.961	0.971	-0.357	0.884	2.723*	1.104
Parental	Father's education	0.039	0.192	-0.033	0.187	-0.026	0.122
	Log parental income	-0.312	0.595	-0.412	0.434	-1.424	0.874
	Log net worth	-0.114	0.128	-0.111	0.186	0.014	0.166
	Parent stockowners	0.217	0.414	-0.228	0.446	0.203	1.454
Childhood socialization	Receive allowance	-0.981	1.026	-0.838	1.398	0.522	1.453
	Saving account	1.717	1.132	2.333	1.596	1.345	1.875
	Parental warmth	-0.033	0.711	-0.043	0.741	-0.177	0.128
	Monitored spending	-0.058	0.122	-0.037	0.184	-0.291	0.457
	Learned about donation	-0.093	0.341	0.118	1.391	0.270	1.196
	Intercept	-22.755***	5.343	-39.431**	14.721	-34.332*	14.481
	<i>R</i> ²	0.154		0.146		0.144	
	<i>F</i> -square	397***		245***		194***	

p* < .05. *p* < .01. ****p* < .001.

tate continued communication about financial matters into young adulthood. However, parents who may be overly close and threatened by the young adult's eventual residential and financial independence may use their resources to induce the avoidance of such adult roles and to encourage the young adult's continued financial dependency (Avery, Goldscheider, & Speare, 1992). As parental warmth can facilitate the socialization process of children, young adults may be more receptive to the teaching of affectionate parents to develop financial capability.

Young adults whose parents monitored their spending as children were likely to own savings account and perceive that they are good at managing money and less likely to worry about their personal finances. Effective parental control not only facilitates a child's adoption of his or her parents' financial practices but also fosters their positive attitudes toward personal finances. The findings from the current study are consistent with previous studies that conclude that monitoring children's money management helps children internalize expectations about savings and long-term planning (Pliner et al., 1996).

Table 5. Money Management and Financial Attitudes

Variables	Manage full money	Responsible for managing money			Good at managing money			Financial worry			
		<i>b</i>	<i>SE</i>	Odds	<i>b</i>	<i>SE</i>	Odds	<i>b</i>	<i>SE</i>	Odds	
Demographic	Age	0.240**	0.095	1.319	-0.030	0.090	0.970	-0.058	0.090	0.944	
	Male	0.442**	0.190	1.556	0.358*	0.181	1.431	-0.094	0.180	0.911	
	White	0.496**	0.244	1.644	0.047	0.224	1.047	0.475*	0.235	1.608	
	Full-time college student	0.112	0.225	1.013	0.326	0.205	1.385	-0.274	0.201	0.758	
	Part-time college student	0.174	0.448	1.191	-0.327	0.356	0.721	-0.048	0.339	0.952	
	Live with parents	0.276	0.204	1.612	0.671***	0.195	1.944	-0.171	0.205	0.841	
	Problem solving	-0.009	0.007	0.991	-0.771	0.692	0.462	-0.018*	0.008	0.983	
Parental	Employed	0.694***	0.198	2.004	-0.104	0.181	0.903	-0.159	0.180	0.853	
	Father's education	-0.085	0.100	0.915	-0.045	0.074	0.957	0.181*	0.095	1.199	
	Log parental income	-0.183	0.128	0.833	-0.259**	0.112	0.778	0.112	0.120	1.119	
	Log net worth	-0.007	0.029	0.993	-0.013	0.028	0.996	-0.077***	0.026	0.924	
	Parent own stocks	-0.453*	0.231	0.633	0.019	0.226	1.019	-0.128	0.224	0.880	
	Childhood socialization	Receive allowance	-0.193	0.194	0.823	-0.205	0.194	0.809	-0.371*	0.191	0.686
		Saving account	0.473**	0.218	1.605	0.097	0.205	1.101	-0.185	0.205	0.831
Parental warmth		-0.043*	0.021	0.958	-0.042*	0.020	0.994	-0.007	0.019	0.993	
Monitored spending		-0.021	0.073	0.980	0.138*	0.070	1.149	-0.138*	0.070	0.871	
Learned about donation		0.655***	0.202	1.785	0.138	0.191	1.116	-0.267	0.142	0.754	
Intercept		-2.222**	0.946		9.493**	3.832		7.236**	2.146		
<i>N</i>	573			575			575				
Pseudo <i>R</i> ²	0.145			0.141			0.116				
<i>X</i> ²	69.4***			58.3***			45***				

p* < .05. *p* < .01. ****p* < .001.

While there were no direct measures of communication about general money management in the data, a proxy of communication about money management, communicating about donations during childhood, was included. Communicating about monetary donations was positively associated with responsibility for money management. Communication is a very important social interaction that affects children's consumer behavior (Moschis, 1987). Parents guide and share their values, norms, attitudes and behaviors with their children through communication about money (Bakir, Rose, & Shoham, 2006), and learning from and discussing with parents were found to have an effect on the financial knowledge and behavior of young adults (Jorgensen & Salva, 2010).

Mathematical problem solving was positively associated with financial asset ownership, stock ownership, and worries about finances. These associations seem to last into young adulthood, as Kim et al. (2011) found, during childhood. The findings support previous studies that link numeracy, the ability to reason with numbers, and other mathematical concepts to stock ownership (Christels et al., 2008), asset holdings (McArdle, Smith, & Willis, 2009), and financial market participation (Cole & Shastry, 2009). Furthermore, mathematical ability has been associated with acting patiently (Benjamin, Brown, & Shapiro, 2006) and time preference (Gruber, 2001), which affects financial management and long-term planning. An interesting finding was the negative association between financial worry of young adults and mathematical problem-solving ability. It is possible that those who may have the ability to delay gratification and act patiently are less likely to worry about their future, because they feel more control over their financial future than others do.

While college attendance influences ownership of liquid assets in positive ways, college education also is likely to increase the total amount of credit card and education debt. As costs of higher education have become an increasing burden on many Americans, more young adults are taking on credit debts to fund their education. Attending college seems to have a positive effect on financial asset ownership, similar to previous findings on the positive relationship between education and savings behavior (Bertaut & Starr-McCluer, 2001), and the positive relationship between educational attainment and financial literacy (Lusardi et al., 2010). While college education is invaluable, attending college can put young adults at risk in terms of debt, especially if they are financially independent and from families with modest means (Lyons, 2004). Although

the Credit CARD Act of 2009 limited credit card marketing for college students, there seems to be a great need for credit and financial education for young adults, especially college students. Most literature on financial management among young adults has focused on college students. In addition to the credit card debt, those who are not attending college may be at a higher risk as they are more likely to be unbanked. When half of young adults are not attending college, additional delivery methods for financial education other than personal finance courses and classes on campus need to be developed for them, as they are not easy to reach.

Employed young adults are more likely to own financial assets and be responsible for managing money, while they are also more likely to have more non-school credit card debts than unemployed adults. This finding may be due to the fact that young adults who need to be financially independent are working, putting them at higher risk. The findings are consistent with the previous study that associated a child's wage opportunities with financial independence (Whittington & Peters, 1996). More financial education opportunities targeting these working young adults, both in college and not, are needed to address the potential credit card issue.

Previous studies found the socioeconomic status of parents to be linked to financial literacy and financial management of young adults (Lusardi et al., 2010; Mandell, 2008; Shim et al., 2009). The effects of parental factors on asset ownership start early in life and continue throughout adulthood. Young adults whose parents have higher net worth are less likely to worry about personal finances. However, young individuals from higher-income households feel that they are poorer at money management. Parents with higher socioeconomic status may protect their children from financial concerns but may not give opportunities to learn and practice financial management skills. The present study found some effects of parental income and asset ownership on the asset ownership of young adults, while parental asset and income did not explain the amount of credit card debt that young adults took on. The results further confirm that young adults are in a great need of education on credit card management regardless of their socioeconomic background.

Racial differences have been found in financial literacy and management (Lusardi et al., 2010; Lyons, 2004). The present study showed that White students were more likely to own financial assets than others while they did

worry more about their finances. This situation may be because minority students were more likely to come from unbanked households, which limits their own financial asset ownership. In terms of financial worry, White students may have different expectations and standards for their financial futures. Also, they worry more as they feel they may not be able to maintain the lifestyle they are accustomed to, which has been provided by their parents. Gender differences were observed in a more favorable way toward men. Males were more likely to own financial and liquid assets. Further, men tended to have lower credit card debt (total and non-school related), but were 53% more likely than women to have greater responsibility for managing their finances and were 43% more likely than women to perceive themselves as being good at managing their money.

Implications

The results of this study have a number of implications for researchers, financial educators, parents, and policymakers. Findings support existing concerns about the financial management abilities of young adults such as credit management, savings, and investing. To suggest that parental socialization fully explains young adults' financial attitudes and behaviors may be overreaching. Although it is understood that parents are the most salient factor in influencing young adults' financial values, attitudes, and behaviors, limited information has been available about the mechanisms of parental financial socialization. Additionally, it is suggested that the follow-up studies with these adults a few years later (ages 25-30) would provide useful information. Currently, extensive financial management data were not available in the ongoing PSID for the transitioning young adults in this age group. However, there will be additional waves of TA, which will allow the gathering of data of young adults over time.

Additional studies on child-parent interaction, such as relationship, parenting aspects, and financial outcomes, could provide more information about the socialization process. Our study does not assume any causality in explaining financial attitudes and behaviors. Further, the study is limited to parental socialization, but other socialization agents, such as school, media, and peers, may also influence the financial socialization of young adults. Longitudinal studies with information about other financial socialization agents, such as peers and the media, would enable further understanding of how individuals develop financial attitudes and behaviors over their lifetimes. Especially, the PSID CDS did not have information about financial education at

schools. As more states are establishing financial literacy standards and mandating personal finance classes, more young adults are receiving financial education programs in elementary, middle and high schools. Further studies are needed to include the effects of such formal education in the financial socialization process.

Notably, young adults who are not attending college could be more vulnerable, but limited research is available about this group. Typically, these young adults are from families with limited socioeconomic resources and have parents who may lack financial literacy to provide appropriate socialization. The effects of parental roles in financial socialization may be different. Additional studies are needed to provide more information about how those young adults who are not attending college manage their finances and the factors that determine such practices.

This study supports the importance of parental socialization during childhood in the financial management of young adults. It is suggested that financial education starts early, especially in the family. The present study provides several specific suggestions for parents and financial educators. First, childhood savings accounts are likely to help financial asset ownership among young adults. Experts emphasize the importance of access to financial services and the benefits of childhood savings accounts (Elliott & Beverly, 2010; Johnson & Sherraden, 2007; Peng et al., 2007). This study supports savings accounts as an educational tool for children, which helps them into young adulthood with financial asset ownership. Further, children whose parents are unbanked themselves need to target additional opportunities, such as a school credit union or bank.

Second, an allowance by itself may not be an effective tool. Without substantial parent-child interaction such as communication, monitoring, and opening a savings account, giving allowances was not significant in establishing good financial practices. Monitoring how children spend their money can help children take responsibility and internalize the rules of money management. However, forgoing allowances may have emotional consequences, as children may develop anxiety about money that may influence their future financial behaviors in a negative way. Opening a savings account could be a great practice for communication and monitoring when parents give children allowances.

Third, teaching about credit earlier may be important. With the Credit CARD Act of 2009, access to credit for young adults will be limited without parental approval. However,

the present study finds that parental factors and parental socialization have little influence on credit card debt. Yet, many young adults, whether they are in college or not, seem to carry credit card debt very early. Understanding of borrowing and the importance of savings can be taught at a very young age. With the growing debt of young adults, understanding credit and the principle of borrowing can be taught well before they are ready to apply for a credit card. Fourth, trust and warm relationships between parents and children can facilitate parental financial socialization, such as communication and rules, but must be appropriate for developmental stages. Financial independence may increase the financial risk of young adults (Lyons, 2004) but is also a milestone of adulthood. The overly close and protective parent-child relationship may limit opportunities for young adults to practice adult roles in financial management and move toward financial independence. Despite the importance of parental socialization, many young adults from disadvantaged families may not receive appropriate financial socialization in the family and need to supplement the deficiency. Formal financial education in elementary, middle, and high schools could complement financial socialization in the family. Providing financial education in public schools may be particularly beneficial to children from disadvantaged backgrounds (Lusardi et al., 2010). However, financial educators and policymakers must also understand that the substantial number of young adults that slip through the school system often lack needed financial literacy (Mandell, 2008). Young adults must be reached in a number of financial educational initiatives such as workplaces, communities, and the Internet.

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