Outstanding AFCPE® Conference Paper: Debt Burden of Young Adults in the United States

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Factors associated with the borrowing behavior of young adults who are transitioning from financial dependence to financial independence were identified. Data used were from the 2009 Transition to Adulthood and its parental companion data set, Panel Studies of Income Dynamics. Results indicate that age, gender, race, and work status are associated with the debt burden of young adults. Conversely, closeness to mother and communication, parental resources, and human capital attainment are negatively associated with borrowing behavior. Financial independence was positively associated with both credit card borrowing and student loan debt of college students.

Key Words: college students, debt burden, financial independence, financial management, young adults

Introduction

Young adults in the United States are struggling to establish their financial future. With the rising cost of higher education and high unemployment rates among young adults, growing debt continues to be an issue for young adults in the United States. According to the Consumer Financial Protection Bureau, student loan debts have surpassed the $1 trillion mark. Young adults graduated from college with an average of $25,000 in loans in 2010. In addition to student loans, undergraduates are carrying record high credit card balances with an average balance of $3,173 (Sallie Mae, 2009).

Other studies and reports have examined college students and debt issues. However, limited information is available about financial management of young adults who are not in college. More than half of young adults ages 18 to 21 do not attend college but have difficulty finding employment in the current economic condition. Many pile up student loans by attending private trade schools without graduating or finding employment. From April to July 2011, more than half of youth ages 16 to 24 were unemployed (Bureau of Labor Statistics, 2011).

The recent economic downturn, the rising cost of higher education, and the subsequent decreasing ability of parents to financially support their children's college education have created a problematic situation for contemporary young adults. Current literature on youth development describes 18 to 25 year olds as transitioning or emerging adults because they are in between adolescence and adulthood (Arnett, 2004). In the current environment, transitioning adults are faced with challenges arising from the following issues: financial and economic instability, the decision to become financially independent, interpersonal relationships, and cognitive and emotional development. Recent findings suggest that the transitioning adults are more likely to demonstrate risk-taking behaviors and engage in poor financial decision-making (Nelson, Lust, Story, & Ehlinger, 2008; Todesco, 2005; Worthy, Jonkman, & Blinn-Pyke, 2010). The objective of the current study is to determine how factors associated with transitioning to adulthood, relationship with parents, and related socioeconomic and demographic characteristics affect young adults' credit card debt and student loan borrowing behavior. The current research also examined the role of financial and emotional support from parents, who may themselves be struggling to meet the financial needs of their families, in the borrowing behavior of young adults.

This paper examined the determinants of young adults' credit card borrowing and student loan holding behavior, after controlling for several factors associated with emerging adulthood, of the participants. This paper provides a

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discussion of the factors associated with young adults' debt that will be of interest to policy makers, economists, and financial counselors. The primary findings of the study indicated that tremendous heterogeneity exists in the borrowing behavior of this group.

Review of Literature

The recent downturn in the economy provided numerous examples of how a lack of financial capability can impact family life (Jorgensen & Savla, 2010). The resulting changes in the U.S. economy have increased the importance of personal financial knowledge (McWilliams, 2008). The current generation of young adults enter universities and early adulthood at a time when the minimum wage is near an all-time low and college tuition is at an all-time high (Slesnick, 2001). In particular, college costs have been rising roughly at a rate of 7% per year for decades. Since 1985, the overall consumer price index has risen 115% while the college education inflation rate has risen nearly 500% (Odland, 2012). One of the biggest increases in youth indebtedness is due to educational loans, as student debt has become more common with growing enrollments in post-secondary schools and precipitous increases in tuition (Dwyer, McCloud, & Hodson, 2011). Credit card debt has also increased sharply among youth while young adults currently represent the fastest growing group of those filing for bankruptcy (Draut & Silva, 2004; Draut, 2006). The current generation seems to not be financially prepared for the world in which they are going to live (Thornberg & Haveman, 2006).

A large number of studies have been conducted on college students' financial knowledge and/or behaviors (Elliott & Beverly, 2011; Heckman & Grable, 2011; Murphy, 2005; Nelson et al., 2008; Norvilitis, Szablicki, & Wilson, 2006; Robb & Pinto, 2011; Xiao, Tang, Serido, & Shim, 2011). Few studies have included non-college students (Lusardi, Mitchell, & Curto, 2010; Thornberg & Haveman, 2006). The current study extends the coverage to both college students and non-college students, and examined whether there are differences between the two groups.

Financial Literacy

Norvilitis et al. (2003) reported that debt is directly related to a lack of financial knowledge. Indeed, financial literacy, the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being, may affect retirement planning, stock market participation, and portfolio choice (Delavande, Rohwedder, & Willis, 2008; Lusardi & Mitchell, 2007, 2008; Van Rooij, Lusardi, & Alessie, 2011). It also has been associated with consumer choices, not to mention hospital choices and health plan choices (Greene, Hibbard, Murray, Teutsch, & Berger, 2008; Jae & Delvecchio, 2004; Peters et al., 2006). According to individual and family life cycle theories, one of the key tasks during the transitional period to young adulthood is gaining financial independence. The financial habits formed during this transition are likely to persist throughout adulthood. Debt management is one indicator of financial literacy by young adults. Financial literacy is influenced by societal environment, particularly parents' behavior, financial education and personal experience with dealing with finance (Chinen & Endo, 2012; McGoldrick & Carter, 1999; Serido, Shim, Mishra, & Tang, 2010). In addition, financial literacy has been shown to be strongly related to socio-demographic characteristics and family financial sophistication (Lusardi et al., 2010). Thus, this study examined factors related to individual and parental characteristics.

Individual Characteristics

Previous studies have pointed out the existence of gender differences in regard to financial literacy, concluding that financial literacy of women is lower than that of men (Chen & Volpe, 2002; Ford & Kent, 2010; Lusardi et al., 2010; Volpe, Chen, & Pavlicko, 1996; Zissimopoulos, Karney, & Rauer, 2008). Studies observed at the collegiate level suggested that, on average, women were less knowledgeable than men about markets and investing (Chen & Volpe, 2002; Goldsmith & Goldsmith, 1997). However, the overwhelming majority of factors related to the gender gap are not explained by differences in covariates, that is, characteristics of men and women, but rather by differences in coefficients, or how literacy is produced (Fonseca, Mullen, Zamarro, & Zissimopoulos, 2012). The child's gender also influences the parent-child process in financial socialization. According to Lippa's study (2002), women tend to enact communal roles and men tend to enact more agented roles, while the parents of sons have higher expectations for working and saving (Newcomb & Rabow, 1999). Bailey and Lown (1993) found that parents of sons are more likely to talk with their children about money than are the parents of daughters.

Research has reported that poor financial behaviors or lack of financial literacy is more common among those who are younger and with less education (Cole & Shastry, 2009; Fonseca et al., 2012; Gathergood, 2012; Murphy, 2005). In particular, years in college appeared to be a logical predictor of level of debt, with debt increasing with each year in college (Boddington & Kemp, 1999; Norvilitis et al., 2006). Furthermore, age appeared to be a separate predic-

tor of the number of credit cards held and attitudes toward debt (Davies & Lea, 1995; Hayhoe, Leach, & Turner, 1999). Specifically, as students age, they become more tolerant of debt and acquire more credit cards (Norvilitis et al., 2006). As for race or ethnic groups, lower financial literacy has been found among Blacks (Murphy, 2005).

Lower rates of employment and higher rates of unemployment also have been observed as having an association with debt, in other words, poor financial literacy (Gathergood, 2012). However, previous research has explored the positive and negative effects of employment, and two developmental perspectives, work benefits and work consequences have been used to clarify the nature of this debate (Abramovitch, Freedman, & Pliner, 1991; Bauermeister, Zimmerman, Gee, Caldwell, & Xue, 2009; Beutler & Dickson, 2008; Greenberger & Steinberg, 1986; Irwin, Burg, & Uhler-Cart, 2002).

Perry and Morris (2005) found significant and positive relationships between personal income levels and responsible financial management behavior among consumers aged 20-40. More experience could improve financial literacy but the relationship has not been clear.

Zhan, Anderson, and Scott (2006) documented that among a low-income population, those who have filed their own taxes and hold a bank account reported increased knowledge about financial topics. Heckman and Grable (2011) also mentioned that more financially independent students should be more knowledgeable for the same reason; increased experience with their financial situation. In contrast, Jorgensen and Savla (2010) reported that students who paid their own way through college did not have a significantly higher level of financial attitude than those who did not. Also, level of income has been examined as one of the variables that can have an effect on students' personal finance knowledge. Lachance, Beaudoin, and Robitaille (2006) found that there seems to be a positive relationship between level of income and credit knowledge among young adults in Canada. In addition, level of income was significantly and positively related to personal finance knowledge, while student income had the largest direct effect on financial knowledge (Heckman & Grable, 2011). In another study, individuals in the low-income bracket were found to lack basic financial literacy (Zhan et al., 2006).

Not residing with parents increased the likelihood of attaining financial independence (Whittington & Peters, 1996). Turning to marital status, previous studies have reported that divorced individuals are less financially literate than never-married individuals and less financially literate than currently married respondents (Fonseca et al., 2012; Taylor, Jenkins, & Sacker, 2011). The length of time in one's most recent relationship does not appear to have any effect on financial literacy, while years since divorce were associated with increased financial literacy (Fonseca et al., 2012).

Parents' Characteristics

A number of studies have reported the positive association of parent socioeconomic status with positive financial outcomes in childhood and young adulthood (Destin & Oyserman, 2009; Shanks, 2007). Parents with educational attainment and financial resources, such as wealth, savings, stocks, and income can provide more resources that increase human, social, and financial capital for the developing child and foster positive financial practices and asset acquisition in young adulthood (Conger & Dogan, 2007; Destin & Oyserman, 2009; Johnson & Sherreden, 2007; Shanks, 2007). Parents with a higher education level and wealth showed a positive association with young adults' financial literacy (Lusardi et al., 2010; Murphy, 2005). During their transition to adulthood, many young adults depend on financial support from their parents due to the period of early adulthood becoming more protracted (Schoeni & Ross, 2005). Furstenberg and others (2005) argued that young adults who lack the needed support from their family to make a successful transition to adulthood are vulnerable. On the other hand, negative associations have been discussed as well. Students who relied on parental wealth and assets for their livelihood could have less knowledge and lower self-efficacy (Heckman & Grable, 2011).

Parent-Young Adult Relationship

Parents are considered the most influential agents of socialization in their children's lives, an influence which has been shown to produce long-term effects (Moore, Raymond, Mittelstaedt, & Tanner, 2002; Vandell, 2000). Parent-child interactions is important in financial socialization of children (Alhabeeb, 1999; Clarke, Heaton, Israelsen, & Eggett, 2005; John,1999; Kim, LaTaillade, & Kim, 2010). Strong parenting practices, such as explicitly teaching and demonstrating financial concepts, can influence financial literacy (Clarke et al., 2005). Direct influences such as family discussions and keeping track of allowance or gift income could lead to an increased knowledge and the formation of attitudes, values, and behaviors toward money (Allen, Edwards, & Hayhoe, 2007; Moore & Stephens, 1975; Moschis, 1985; Moschis, Prahasto, & Mitchell,

1986). The quality of parent-child communication regarding financial topics proved to be the most potent predictor of children's financial, psychological, and personal well-being (Serido et al., 2010). In a study by Jorgensen and Savla (2010), participants who believed they learned explicitly about finances from their parents had more positive financial attitudes and behaviors. Among the studies regarding experience and circumstances in investments, Lusardi et al. (2010) investigated the positive influence of parents, whereas Peng, Bartholomae, Fox, and Cravener (2007) concluded that parents' savings habits have no influence on investment knowledge.

Hypotheses

Based on the above review of literature, we view young adults' credit card borrowing and student loan accumulation behavior as a decision determined by economic, demographic, and social factors relevant to the transitioning adults' and their parents' characteristics. Specifically, we propose the following hypotheses:

H_1: The transitioning adults' credit card borrowing and amount of student loan borrowing is associated with individual characteristics, parental resources, and parent-child relationships.

H_2: College attending young adults' credit card borrowing is associated with individual characteristics, parental resources, and parent-child relationships.

H_3: Credit card borrowing of young adults who never attended college is associated with individual characteristics, parental resources, and parent-child relationships.

Methods

Data

The current study used the Panel Study of Income Dynamics (PSID) data to examine predictors of financial independence of young adults. The study drew information on young adults aged 18 to 25 from the PSID Transition to Adulthood (TA) 2009 Supplement and the Panel Study of Income Dynamics (PSID – 2009 main file). The PSID is a longitudinal study of a nationally representative sample of U.S. men, women, children, and their families. TA is a dataset that includes surveyed information of transitioning young adults whose parents are included in the main PSID file. For approximately the past four decades, the study has collected annual data from these families and individuals about their demographic, economic, and employment behavior.

The present study included the TA supplement comprising 1,474 young adults ages 18 to 25. This paper examined how individual and family level variables, drawn from the main PSID and the TA supplement, influence the student loan and credit card debt holdings of young adults. The paper also examined whether parental closeness, communication, and parental economic behavior were associated with the young adults' borrowing behavior. This study excluded the respondents in the TA supplement who were younger than 18 years of age.

Dependent Variables

The dependent variables used for empirically testing our hypotheses were the amount of credit card debt held and the amount of student loans held by the respondents. In the empirical analyses of our models, we used the log forms of these variables.

Independent Variables

Demographic information. Respondents' age, race, and gender were self-reported. One dummy variable was used to indicate the gender of the respondent (1, 0), with the omitted category being male. Dummy variables were used to indicate whether or not the respondent had a job (1, 0), and the omitted variable was comprised of respondents who did not work. The race/ethnicity variable included in the study was coded as 1 if the respondent was White and 0 if otherwise. The race/ethnicity variables were compared to the reference group of non-White respondents. The majority of the respondents in this study were not married. To control for marital status, a dummy variable was constructed for respondents who had never married were coded 1 and as 0 if otherwise. The log transformed values of respondents' income, and financial asset holdings were included in the model. The transitioning adults' total savings in their bank accounts and their savings held in bonds, CDs, and money market accounts were included in the asset variable. Approximately half of the respondents in this data lived with their parents. To control for this we constructed a dummy variable for respondents who lived with their parents was coded 1 and 0 if otherwise.

Financial independence. Perceived financial independence was measured based on a Likert type scale, where 1 signified the least amount of financial independence and 5 signified the maximum amount of financial independence. The PSID provided the reported financial independence variable. The variable was constructed based on the participants' responses to the following questions that were also available in the dataset: How much responsibility for earning own living? How much responsibility for paying own rent?

How much responsibility for paying own bills? How much responsibility for managing own money?

The perceived money management ability variable was constructed by summing the respondents' responses to their perceived ability in being able to pay off credit card debt and their perceived ability to manage money. The responses to these questions were recorded on a 1-7 Likert type scale.

Some respondents received financial help from their families. The family financial help variable was constructed by summing the dollar values of the amounts of help received towards buying a house or a condo, payments of rent or mortgage, purchase of a personal vehicle, the value of tuition costs, payments of expenses and bills, amount of personal loans, and amounts of other large gifts. The log transformed form of the family financial help variable was used in our model.

Closeness to mother variable used in our study was measured based on a Likert type scale, where 1 signified the least amount of perceived closeness to the respondents' mother and 7 signified the maximum amount of closeness to the respondents' mother. The closeness to father variable was also similarly constructed. The communication with mother variable was constructed by summing the responses to the questions related to job plans, educational plans, future family plans, and work-family conflicts that were recorded on a 1-7 Likert type scale. The communication with father variable was similarly constructed.

Parental economic factors. This variable included in our model was comprised of parental education, income, wealth, stock ownership, and their debt to asset ratios. The parental education variables were included to control for the number of years of education for mother and father. Log transformed values of income, wealth, and debt to asset ratio variable*s* were used to control for non-normality that may have been present in the data for these variables. The parental stock ownership (1, 0) was binary.

Analyses

The empirical analyses was comprised descriptive statistics and regression analyses. To empirically test the hypotheses of this paper we ran five separate Ordinary Least Square (OLS) regression analyses. The first two regressions examined the determinants of the amount of credit card debt held by the transitioning adults, and the determinants of the amount of student loans held by the respondents who have ever attended college. The next two regression models examined the determinants of total credit card borrowing and student loans for respondents who reported being in college. Finally, the determinants of credit card debt held by young adults who have never attended college was examined in our fifth regression model. See Table 1 for the descriptive statistics in Table 1 and Tables 2, 3, and 4 for the results of the regression analysis.

Results

Descriptive Statistics

The descriptive statistics are shown in Table 1. The results indicated that the average age of the transitioning adults was 21. Approximately 53% of the respondents were women and 47% of the respondents were White. Also, the results indicate that 40% of the respondents were in college, and 9% had graduated. Slightly over half (55%) of the respondents were employed. Mean yearly income for the group was $4,880. Almost half (46%) of the respondents reported living with their parents. Mean wealth of the parents of these transitioning adults was $166,673 and mean parental yearly income was $75,479. Approximately 12% of the parents owned stocks. The self-reported ability to manage money and debt was measured at 9.3 on a scale of 1 to 14. On a scale of 1 to 5 for perceived financial independence, the mean score was 4.

Credit card debt and student loans. The OLS regression results for all young adults are presented in Table 2. The OLS results showed that age, work status, being female, and parental income were positively associated with the amount of credit card debt held by the transitioning adults. Conversely, closeness to mother, amount of communication with mother, completion of college, not being married, parental wealth, and parental stockownership were negatively associated with the amount of credit card debt held by the respondents. The results for the amount of student loan borrowings indicated that age, women, completion of college, respondents' income, and receiving financial help from family were positively associated with the amount of student loan holdings of the respondents. Conversely, being White, having a job, amount of communication with mother, living with parents, father's education, parental wealth, and stockownership were negatively associated with the amount of student loans held by the respondents.

Credit card debt and student loans for respondents currently in college. The OLS regression results are presented in Table 3. The OLS results showed that financial independence, age, work status, and parental income were positively associated with the amount of credit card debt held by the students. Conversely, being White, closeness to mother, amount of communication with mother, not being married,

Table 1. Descriptive Statistics (*N* = 1,474)

	Variables	*M*	*SD*	Min	Max
TA variables	Age	21.155	2.213	18	25
	White	47%		0	1
	Female	53%		0	1
	Work	55%		0	1
	Never married	91%		0	1
	In college	40%		0	1
	Graduated	9%		0	1
	Ever attended college	67%		0	1
	Live with parents	46%		0	1
	Close to father	4.757	2.327	1	7
	Close to mother	5.958	1.674	1	7
	Mother communication	20.000	6.918	0	28
	Father communication	23.000	7.201	0	36
	Received family financial help	$5,625	$13,553	0	$190,005
	Financial independence	4.009	1.203	1	5
	Money management skills	9.227	3.377	1	14
	TA income	$4,880.00	$9,709.00	0	$150,000
	TA asset value	$1,569.00	$40,233.00	0	$501,500
Parental variables	Mother education	3.595	2.264	0	8
	Father education	3.359	2.432	0	8
	Parental wealth	$166,673.00	$565,983.00	0	$8,217,000
	Parental debt/asset ratio	-7.020	99.000	-38	3000
	Parental income	$75,479.00	$104,360.00	0	$2,076,000
	Parental stockownership	12%		0	1
Dependent variables	Credit card debt	$383.01	$1,591.14	0	$20,000
	Student loan	$6,148.08	$14,529.69	0	$160,000

and parental wealth were negatively associated with the amount of credit card debt held by the respondents. The results for the amount of student loan borrowings indicate that financial independence, age, women, and respondents' income were positively associated with the amount of student loans holdings of the respondents. Conversely, being White, having a job, father's education, parental wealth, and parental income were negatively associated with the amount of student loans held by the respondents.

Credit card debt for respondents who have never attended college. The OLS regression results are presented in Table 4. The OLS results showed that age, being White, female, and work status were positively associated with the amount of credit card debt held by respondents who had never attended college. Conversely, parental wealth and income were negatively associated with the amount of credit card debt held by this group of respondents.

Table 2. Regression of Credit Card Debt and Student Debt for Transitioning Adults

	Credit card debt			Student loan		
	b	***SE***	***p***	***b***	***SE***	***p***
Financial independence	0.059	0.066		0.006	0.143	
Age	0.273	0.038	***	0.177	0.082	**
White	0.047	0.175		-0.801	0.373	**
Female	0.459	0.170	***	1.035	0.323	***
Work	0.534	0.154	***	-0.951	0.329	***
Close to father	0.103	0.162		0.094	0.123	
Close to mother	-0.118	0.061	*	0.157	0.135	
Mother communication	-0.035	0.018	*	-0.055	0.025	*
Father communication	0.026	0.017		-0.029	0.037	
Live with parents	-0.253	0.156		-1.096	0.327	***
Graduated from college	-0.548	0.255	**	1.457	0.468	***
Money management skills	0.004	0.021		-0.032	0.046	
Log TA assets	0.002	0.019		0.046	0.045	
Log TA income	0.029	0.019		0.181	0.040	***
Log received family financial help	0.034	0.024		0.128	0.044	***
Never married	-0.733	0.260	***	0.683	0.546	
Mother education	0.023	0.043		0.191	0.134	
Father education	0.028	0.040		-0.158	0.086	*
Log parental wealth	-0.080	0.021	***	-0.171	0.042	***
Log parental debt/asset ratio	-0.060	0.045		0.034	0.094	
Log parental income	0.285	0.093	***	-0.187	0.198	
Parental stockownership	-0.445	0.248	*	-1.076	0.433	**
Intercept	-6.882	1.372	***	4.314	2.975	
N	1,537			1,043		
R^2	0.124			0.115		

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

Table 3. Regression of Credit Card Debt and Student Debt for Respondents in College

	Credit card debt			Student loan		
	b	***SE***	***p***	***b***	***SE***	***p***
Financial independence	0.129	0.066	*	0.258	0.137	*
Age	0.387	0.056	***	0.404	0.103	***
White	-0.540	0.264	**	-1.018	0.486	**
Female	0.334	0.228		1.065	0.407	***
Work	0.337	0.175	*	-1.211	0.397	***
Close to father	0.127	0.086		-0.037	0.159	
Close to mother	-0.155	0.077	*	0.035	0.180	
Mother communication	-0.065	0.029	**	-0.045	0.054	
Father communication	0.033	0.027		-0.053	0.049	
Live with parents	0.236	0.218		-0.490	0.404	
Money management skills	0.034	0.031		0.013	0.057	
Log TA assets	-0.042	0.030		0.034	0.056	
Log TA income	0.020	0.028		0.142	0.052	***
Log received family financial help	0.007	0.035		0.094	0.064	
Never married	-2.082	0.550	***	-0.297	1.011	
Mother education	0.018	0.063		0.175	0.116	
Father education	-0.001	0.058		-0.162	0.078	**
Log parental wealth	-0.060	0.029	**	-0.147	0.053	***
Log parental debt/asset ratio	-0.026	0.061		-0.138	0.113	
Log parental income	0.250	0.135	*	-0.385	0.200	*
Parental stockownership	-0.209	0.273		-0.716	0.510	
Intercept	-6.854	2.103	***	3.674	3.892	
N	629			1,043		
R^2	0.204			0.115		

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

Table 4. Regression of Credit Card Debt for Respondents Never Attending College

	b	*SE*	*p*
Financial independence	0.081	0.092	
Age	0.143	0.053	***
White	0.910	0.261	***
Female	0.456	0.226	**
Work	0.593	0.229	**
Close to father	0.090	0.072	
Close to mother	-0.080	0.080	
Mother communication	-0.023	0.024	
Father communication	0.026	0.022	
Live with parents	-0.321	0.251	
Money management skills	0.016	0.030	
Log TA assets	-0.011	0.028	
Log TA income	-0.005	0.028	
Log received family financial help	0.025	0.038	
Never married	-0.060	0.387	
Mother education	-0.014	0.061	
Father education	0.070	0.058	
Log parental wealth	-0.052	0.024	**
Log parental debt/asset ratio	-0.038	0.072	
Log parental income	-0.178	0.088	*
Parental stockownership	-0.452	0.554	
Intercept	-4.971	1.979	**
N	511		
R^2	0.148		

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

Summary and Discussion

The current study provides the debt situation of young adults ages 18 to 25 with a nationally representative sample including college students and non-college students. The averages of debt were moderate ($383 for credit card debt, $6,148 for student loan debt).

H_1 was partially supported. Parental economic resources and parent-child relationships were significantly associated with credit card and student loan balances of all young adults whether they were attending college or not. Consistent with previous findings on financial literacy and parents' economic resources, parents' wealth and stock ownership were negatively associated with both credit card and student loans (Conger & Dogan, 2007). The findings suggest that young adults from households with lower assets could be at higher financial risk in terms of their debt obligations. Young adults who had financial help from families and had higher personal income tend to have higher student loan debts. With high college costs, families provide financial supports but it is not often enough. Still, young adults need to work for income to supplement. However, high student loan debt may not be avoidable. Further, having a job may decrease the student loan amount but increase credit card debts as working students may be eligible for more credit cards than others.

Relationships and communication with mothers were negatively associated with credit card debt. This finding suggests mothers might help young adults by discussing how to manage credit card and student loan debts with them. While there is no specific question about communication on money management in the PSID, a number of communications, such as career and education, were included in the PSID. For those whose mothers communicate with children regarding career and education might discuss financing education as well. This finding may suggest that the role mothers could have in young adults' borrowing by communicating.

Living with parents was negatively associated with the amount of student loans. Adding room and board in addition to tuition and fees can be unaffordable to many families without student loans. Economic resources of parents were negatively associated with the amount of debt created. Parents' income was positively related to credit card debt but not with student loan debt. Young adults with higher household income may have more access to credit cards with higher limits while their parents could pay educational costs, reducing the amount of student loans.

H_2 was partially supported among young adults currently attending college. For those who are in college, non-White students tend to have higher credit card and student loan debt, which suggests the vulnerability of minorities. Different from all young adults, those who are financially independent tend to have higher credit card debt and student loan debt. As young adults get older, their debt in credit cards and student loans increase. Employment did not have the same effects on debt. Employment helps young adults borrow less from student loans while it may give opportunities to open credit cards, leading to higher credit card debt. Working young adults will need more information about credit management. Income of young adults was positively associated with student loans. Those who make more income on their own may borrow more student loans. Also, it is possible that those with higher student loan could work and earn higher income. Female students had higher amounts of student loans but not credit cards. More education and information on financial aid may be needed for female students.

Relationships and communication with mothers were found to be significantly associated with credit card debt of college students but not with student loans. Parental economic resources, such as wealth and father's education, were negatively associated with debt balances. However, parents' income was positively associated with credit card debt while negatively associated with student loan debts. Further analyses could be done to examine the relationship. Many young adults receive credit cards through their parents. Parents with higher income may have higher credit limits which could lead to higher credit card balances. Overall, college students without family support (instrumental and social) who are financially independent might be at higher financial risk than others.

H_3 was partially supported for young adults who are not in college. Gender, ethnicity, and parental resources affected the credit card borrowing of young adults who do not attend college. There is limited information about young adults who never attended college (33% in the current study). Among those who never attended college, female, White, older, and working young adults had a higher amount of credit card debt. Parents' income and assets was negatively associated with their credit card debts. These young adults are hard to reach. Many young adults who are not in college may not work, and work part time if they do without full benefits. Parents may not be a good source of education or communication as none of the parent-child interaction variables were found to be significant.

Employment was positively associated with credit card debt. While previous studies suggested the positive effects of employment on financial literacy (Gathergood, 2012), the ability to get a higher credit limit could increase the credit card balance of young adults.

Females were more likely to have higher amounts for credit card debts, suggesting targeted education programs for female young adults. This finding was consistent with previous studies that young women have lower levels of financial literacy than men (Chen & Volpe, 2002; Ford & Kent, 2010; Karney & Rauer, 2008; Lusardi et al., 2010; Volpe et al., 1996; Zissimopoulos et al., 2008).

Findings from young adults who are not attending college were different from those of college students. Neither mother-child interaction variables nor financial independence and living with parents were significant. They may have a different relationship with mothers as they might have made a transition into adulthood earlier than college students. Parents' roles in financial socialization may be different.

Implications

The results of this study have useful implications for researchers, financial educators, and policy makers. Findings from the present study support existing concerns about the credit management behavior of transitioning young adults. These findings suggest that there is a need for more attention to young adults from families with modest means and minorities. They are more likely to build up debts than others while they are entering into adulthood. Teaching credit managment early is important as young adults build up their debt.

Interestingly, closeness to and communication with mothers was negatively associated with debt holdings of young adults. This implies that relationships with mothers may play an important role in the financial well-being and socialization of transitioning young adults. Although the mothers play an important role in influencing young adults' credit behavior, limited information has been available about the mechanisms of maternal financial socialization. Additional studies on child-mother interaction could provide further insight into the role of mothers in the credit behavior and financial well-being of young adults. With these findings, financial educators and counselors could develop programs to help parents with young adults communicate and teach about credit cards and student loans. Educational materials that can be used as parental guidance in debt management for young adults are not widely available.

Contrary to the previous findings, financial management skills were not to be found significant in relationship with credit card and student loan debts among any young adult groups in the current study. Financial knowledge or behaviors were not available in the PSID TA dataset. Future studies need to explore the relationship between financial literacy variables and borrowing of all young adults.

Our study does not assume any causality in explaining credit card and student debt holdings 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 manage credit over their life course. Especially, the PSID CDS did not have any 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. Additional studies are needed to include the effects of such formal education in the financial socialization process.

Further, the current study suggests that there were some differences in significant factors between college students and young adults not attending college. Limited information is available about this group while they may be at high risk due to high unemployment rates among young adults. Future studies with young adults who are not attending colleges will provide more insights into this group.

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