

# Who pays your debt? An important question for understanding compulsive buying among American college students

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## Abstract

Compulsive buying, defined as the inability to control purchasing behaviour, is higher among college-aged students than it is among the general public. The present study examined the factors related to compulsive buying among college students and how those factors differ as a function of who paid the majority of their debt: themselves or their parents. A total of 628 undergraduates from the US completed a questionnaire containing items to measure compulsive buying, personality and financial responsibility. Results revealed that variables predictive of compulsive buying varied depending on the amount of credit card debt that the student was personally responsible for paying. Findings have implications for reducing compulsive buying in college students.

Compulsive buying is defined as the inability to control purchasing behaviour. The definition includes engaging in chronic, repetitive purchases that are impulsive, uncontrollable and irrational (Faber and O'Guinn, 1989; Edwards, 1992). Furthermore, compulsive buying often results in negative consequences that arise from excessive spending, such as exceeding credit limits, guilt and personal difficulties with family and friends. Among Americans, the prevalence rate of compulsive buying is higher for college students than the general public. Among college students, this rate ranges from 6% to 15% and rates of borderline compulsive buying have been reported to be as high as 43.6% (Roberts, 1998; Roberts and Jones, 2001; Yurchisin and Johnson, 2004). This figure can be compared with prevalence rates for the general public that are estimated to be 5.8% (Koran *et al.*, 2006). In the present study, we explore compulsive buying among American college students.

## Identity

Emerging identity is one factor that increases a college student's risk of becoming a compulsive buyer. College students are in the process of establishing a financial identity as they transition from being financially dependent on their parents to financial independence. Current cohorts of college students have been raised in a culture that places greater value on financial status (power and prestige) than past generations (Roberts and Jones, 2001; Pryor

*et al.*, 2007). Thus, today's college students are more likely to desire wealth and material possessions than students in past generations.

Values play an important role in the establishment of a financial identity. Materialistic values identify the goals of purchasing behaviour and acquiring material possessions as important (Richins and Dawson, 1992; Richins, 2004). For college students, who are coming of age in a materialistic culture, a successful financial identity may be one that shows power and prestige. Thus, material possessions (e.g. clothes, watches, cars) are primarily valued for their physical manifestation of success rather than for their function (Dittmar, 2005b). In other words, possessions become a means for college students to establish their financial status. Past research has identified a positive relationship between materialism and compulsive buying in college students (Mowen and Spears, 1999). One possible explanation for this relationship is that college students may compulsively buy in an effort to establish a high status identity of power and prestige through the number and/or cost of their possessions (Yurchisin and Johnson, 2004).

## Financial knowledge and credit cards

Easy access to credit cards and limited financial knowledge are other factors that increase college students' risk for becoming compulsive buyers. Currently, in the US, incurring credit card debt

is an acceptable method for pursuing material possessions, and college students are not immune to this cultural belief. Sallie Mae (2009) reported that a large majority of college students (84%) have at least one credit card with an average balance of \$3173. Furthermore, they often use credit cards to purchase items that they cannot afford and carry a significant credit balance (Sallie Mae, 2009). Surprisingly, most college students were able to report the current balance on their credit cards; however, many were unable to report the current interest rate, and they underestimated the time it would take to repay their credit card debt (Seaward and Kemp, 2000; Warwick and Mansfield, 2000). These findings suggest that college students lack a basic understanding of successful credit management practices. Furthermore, Mandell (2008) and Norvilitis *et al.* (2006) reported that college students earn low scores (an average of 60%) on the Jumpstart Coalition for Personal Financial literacy test (eight items address credit). Although Norvilitis *et al.* (2006) reported that debt was predicted by a lack of financial knowledge, Mandell (2008) found no relationship between debt levels and financial literacy.

College students who lack financial knowledge and have easy access to credit cards may engage in compulsive buying because of a lack of consequences in the present for their purchasing behaviour. Thus, they are willing to trade short-term gains (e.g. buying an item now) for long-term costs (e.g. paying finances charges later). Currently, very little is known about the relationship between compulsive buying and financial knowledge. However, a number of studies have found a relationship between credit card debt and compulsive buying (e.g. Norum, 2008).

### Future time perspective

In the current study, future time perspective is defined as self-extension that is how far an individual looks into the future when thinking about his or her life (Seijts, 1998). A few studies have found that college students are more present-oriented in their time perspective than older adults (Green *et al.*, 1994; Brougham and John, 2007). We propose that college students who fail to look to the future are at a high risk for engaging in impulsive behaviours such as compulsive buying. Impulsive individuals show a disregard for future consequences and are more likely to engage in risk-taking behaviours (Granö *et al.*, 2004). Impulsiveness has also been shown to be related to compulsive buying behaviour and credit card misuse (DeSarbo and Edwards, 1996; Pirog and Roberts, 2007). Although the relationship between future time perspective and compulsive buying has largely been ignored, some studies have suggested they may be related. For instance, Norum (2008) used participation in risky health activities as a proxy measure for future time perspective. She found support for a relationship between risky health activities (e.g. smoking, drinking, unprotected sex) and compulsive buying among college students. Adams and Moore (2007) also found a relationship between risky health behaviours (e.g. marijuana use, amphetamine use, unprotected sex) and high-risk credit behaviour. Thus, some support exists for a relationship between a present-oriented time perspective and compulsive buying. The current study directly tests whether a relationship exists between future time perspective and compulsive buying among college students.

### Responsibility for debt, age and gender

Responsibility for the repayment of debt may also play a role in the compulsive buying behaviour of college students. We propose that college students who are responsible for paying their own debt are more likely to have experience with money management, more likely to understand the consequences of excessive spending behaviour and less likely to engage in compulsive buying than students whose parents pay their debts. In terms of stress related to debt, we expected that high levels of financial anxiety would predict higher rates of compulsive buying among college students who are responsible for repayment of their debt as compared with students whose parents assume financial responsibility. Past research suggests that college students who have high anxiety over money matters also have low levels of financial literacy (Mandell, 2008).

Being younger and being a woman are also risk factors for compulsive buying. One consistent finding of past research is that age is negatively correlated with compulsive buying (e.g. D'Astous, 1990; Dittmar, 2005b). Furthermore, a number of studies have reported that rates of compulsive buying among women are significantly higher than those among men (e.g. Schlosser *et al.*, 1994). Some explanations for this difference include women are more interested in clothing, beauty and adornment, and in socializing while shopping than men (Bloch, 1993; Kwon, 1997; Dittmar *et al.*, 2004). However, Koran *et al.* (2006) reported similar compulsive buying rates among men and women. In younger samples, the gender difference for compulsive buying is reduced (Dittmar, 2005b). One explanation for this finding is that younger individuals are less likely to adopt traditional sex roles, and thus, younger men and women are equally like to enjoy shopping as a recreational activity (Dittmar, 2005b).

### Emotional stability and introversion

Emotional stability has also been associated with compulsive buying in college students (Mowen and Spears, 1999). In particular, studies suggest that compulsive buyers experience mood instability (Mowen and Spears, 1999) and purchase items in an attempt to regulate their mood (Dittmar *et al.*, 2007). Although past research has found support for a vicious cycle of shopping-related emotions (negative emotions prior to shopping, positive emotions while shopping and negative emotions after shopping), Saraneva and Sääksjärvi (2008) found a different pattern of results among young compulsive shoppers. These researchers found positive emotions prior to shopping and a mix of negative and positive emotions during and after shopping that were mediated by external conditions. For example, if shoppers found a bargain while shopping, they reported positive emotions. Conversely, if they did not find a bargain, they reported experiencing negative emotions. These findings suggest that the nature of the emotions experienced by young compulsive shoppers may be driven by achievement (e.g. finding a bargain or an item worthy of purchase) rather than emotional regulation, which provides support for the notion that young compulsive buyers are materialistic and motivated to purchase goods to improve their financial identity.

College students who are introverted may also be at high risk for compulsive buying behaviour. Students who are introverted are less likely to participate in social activities and may have fewer

opportunities to make friends and experience social connectedness (Bauer and Liang, 2003). Research suggests that social interaction with friends and sales people is one motivation for shopping (Dittmar *et al.*, 2004). Thus, compulsive buying may become a means for a college student to interact with others and meet their needs for social connectedness.

## Hypotheses

We expected responsibility for repayment of debt to play a large role in determining the variables that would predict compulsive buying among college students. In particular, among students who are responsible for repayment of their own debt, we expected to find higher levels of financial awareness (as measured by financial knowledge, financial responsibility and money management skills) and a future-oriented time perspective to be associated with lower rates of compulsive buying. We would not expect these relationships to emerge for students whose parents repay their debts. We also expected that high levels of financial anxiety would predict higher rates of compulsive buying among college students who are responsible for repayment of their debt as compared with students whose parents assume financial responsibility.

Since emotional instability and introversion–extroversion are personality traits and materialism is a value that is culturally defined, we expected that a relationship between these variables and compulsive buying would exist irrespective of who pays the students' credit debt. We expected that college students who have greater scores for materialism, introversion and emotional instability would show higher rates of compulsive buying than college students who have lower scores on these three dimensions. Since we expected the majority of our sample would be less than 25 years of age, we did not expect to find a gender difference in compulsive buying behaviour.

Although previous studies have suggested a relationship between credit card use and compulsive buying (e.g. Roberts, 1998), none have examined the relationship between other financial variables (financial knowledge, money management, financial awareness), personality variables and compulsive buying behaviour as a function of who is responsible for paying the debt. The present study seeks to fill this void in the literature.

## Method

### Participants

Participants included 628 undergraduate students aged 18–25 years ( $M = 19.96$ ,  $SD = 1.29$ ; men = 173; women = 433; 22 did not indicate a sex) who were enrolled in a large university in Southern California. All participants had at least one credit card, and members of the sample had 2.42 credit cards on average ( $SD = 1.78$ , range = 1–10), with an average credit card debt of \$758.60 ( $SD = \$1533.79$ , range \$0–11 000). Over half of the sample (58.4%) was employed at least part-time. An overwhelming majority of the participants (94.6%) was single. The racial and ethnic background of the sample was as follows: 41.8% Caucasian, 24.6% Asian, 14.5% Hispanic, 7.7% African American and 11.5% other. Just over half of the sample (54%) were social science majors (e.g. psychology, sociology, communications), 18.3% were science majors (e.g. biology, physics, chemistry) and

the remaining 27.7% were double majors, undeclared or had specified a major other than science or social science (e.g. business, fine arts, civil engineering). For analysis purposes, the participants were categorized into one of three groups based on how their debt was paid: self pay respondents (in which the participants pay at least 90% of their credit card debt from income earned from employment), parent pay respondents (in which the participant's parent pays at least 90% of their credit card debt) and combination respondents (in which multiple sources such as employment earnings, savings, parents, loans and other credit cards are used to pay the debt).

### Measurement

The measurement instrument was composed of a paper–pencil questionnaire. The measures were included in the questionnaire to assess the following: (a) compulsive buying; (b) financial awareness; (c) future time perspective; (d) materialism; (e) extroversion–introversion; (f) emotional stability; (g) credit card debt and number of credit cards; (h) work status (part-time or full-time); (i) the source for repayment of credit card debt; and (j) a series of standard demographic questions (age, race/ethnicity, marital status, sex, year in school and major). These items are described in detail later.

Compulsive buying was assessed using the Mowen (2000) version of the compulsive buying scale originally developed by Faber and O'Guinn (1989). Using a nine-point scale (1 = never, 9 = always), the participants were asked to indicate how well nine different statements described their buying behaviour. Sample questions included: 'I have felt that others would be horrified if they knew of my spending habits' and 'I often buy things simply because they are on sale'. The items in the scale showed a reasonable degree of internal consistency ( $\alpha = 0.84$ ). The nine items were averaged in order to obtain an overall compulsive buying score.

Several items included in the questionnaire measured the participants' financial awareness. First, the respondents were asked how worried they were about meeting their financial obligations using a seven-point scale (1 = not at all worried, 7 = extremely worried). Financial responsibility was assessed using the following question: how financially responsible do you believe you are (1 = not at all responsible, 7 = extremely responsible). The participants were also asked to rate how challenging they found money management (1 = not at all challenging, 7 = extremely challenging). Finally, subjective financial knowledge was measured with the following item: how financially knowledgeable do you believe you are? (1 = not at all knowledgeable, 7 = extremely knowledgeable).

A six-item scale developed by Hershey and Mowen (2000) was used to measure future time perspective. The scale taps the extent to which individuals plan for and enjoy thinking about the future. The participants rated how well each of the six different statements described them using a seven-point scale (1 = never, 7 = always). Sample questions included: 'I follow the advice to save for a rainy day' and 'I enjoy living for the moment and not knowing what tomorrow will bring' (reverse coded). The mean scores for this scale were used in the analyses ( $\alpha = 0.62$ ).

Materialism, emotional instability and introversion were measured based on multiple item scales developed by Mowen and

Spears (1999) that used a nine-point rating scale (1 = never, 9 = always). For these measures, the participants were asked to indicate how well each statement described how they acted in their daily life. Sample questions for materialism included: 'acquiring valuable things is important to me' and 'my possessions are important for my happiness'. The sample questions for emotional instability included: 'moody more than others' and 'emotions go way up and down'. The sample questions for introversion included: 'feel uncomfortable in a group of people' and 'quiet when with people'. The scales were found to be internally consistent: materialism (five items,  $\alpha = 0.90$ ), emotional instability (seven items,  $\alpha = 0.90$ ) and introversion (six items,  $\alpha = 0.89$ ). Again, for each scale, the mean scores were calculated and used for the analyses.

### Analyses plan

Several techniques were used to analyse the data. Primary analyses were composed of group-based multiple regressions to better understand the factors that predict compulsive buying. Ancillary analyses were composed of two separate analysis of variance (ANOVA) models to examine the number of credit cards and the amount of credit card debt and three correlations. Prior to conducting analyses, all data were checked for skew and kurtosis, and scale scores were computed.

### Results

In order to examine the role of responsibility for repayment of debt in compulsive buying, separate ordinary least squares regression models were calculated based on the source of repayment for the credit debt (self, parent, combination). In all three of the models, compulsive buying served as the criterion measure. Predictor variables included sex, anxiety about meeting financial obligations (henceforth referred to as financial anxiety), how challenging the respondents found it to manage their money (henceforth referred to as money management), general financial responsibility, financial knowledge, introversion, emotional instability, materialism and future time perspective. The results for the regression models are reported separately later.

The regression model for the participants who paid at least 90% of their credit debt from employment earnings was significant,  $F(9,161) = 12.74$ ,  $P = 0.01$ . Of the nine predictors, four were statistically significant (see Table 1): money management ( $\beta = 0.22$ ,  $P = 0.01$ ), emotional instability ( $\beta = 0.15$ ,  $P = 0.04$ ), materialism ( $\beta = 0.44$ ,  $P = 0.01$ ) and future time perspective ( $\beta = -0.14$ ,  $P = 0.03$ ). These variables accounted for 42% of the variability in compulsive buying scores.

The regression model for those participants whose parents paid at least 90% of their debt was also significant,  $F(9,192) = 17.56$ ,  $P = 0.01$ . Of the nine predictors, four were significant: sex ( $\beta = -0.18$ ,  $P = 0.01$  (note: women were coded 1, men were coded 2)), financial responsibility ( $\beta = -0.24$ ,  $P = 0.01$ ), emotional instability ( $\beta = 0.23$ ,  $P = 0.01$ ) and materialism ( $\beta = 0.50$ ,  $P = 0.01$ ). A total of 45% of the variability in compulsive buying was accounted for in this model.

Finally, the regression model that examined the compulsive buying of the respondents who used a combination of sources to pay for their debt was also significant,  $F(9,223) = 17.84$ ,  $P = 0.01$ . Three of the nine predictors in this model were significant: finan-

**Table 1** Regression coefficients based on who pays your debt

Variable	$\beta$	t	P
Self pay respondents			
Sex	-0.07	-1.15	0.26
Financial anxiety	-0.01	-0.08	0.93
Money management	0.22*	2.77*	0.01*
Financial responsibility	-0.10	-1.31	0.19
Financial knowledge	-0.01	-0.01	0.86
Introversion	-0.06	-0.82	0.41
Emotional instability	0.15*	2.12*	0.04*
Materialism	0.44*	6.95*	0.01*
Future time perspective	-0.14*	-2.16*	0.03*
Parent Pay respondents			
Sex	-0.18*	-3.24*	0.01*
Financial anxiety	-0.05	-0.76	0.45
Money management	0.01	0.04	0.97
Financial responsibility	-0.24*	-3.96*	0.01*
Financial knowledge	0.10	1.53	0.13
Introversion	-0.05	-0.84	0.40
Emotional instability	0.23*	3.76*	0.01*
Materialism	0.50*	8.58*	0.01*
Future time perspective	-0.09	-1.58	0.12
Combination pay respondents			
Sex	-0.06	-1.12	0.26
Financial anxiety	0.10	1.60	0.11
Money management	0.06	0.99	0.32
Financial responsibility	-0.19	-2.78*	0.01*
Financial knowledge	0.08	1.32	0.19
Introversion	-0.09	-1.51	0.13
Emotional instability	0.24*	3.99*	0.01*
Materialism	0.43*	7.73*	0.01*
Future time perspective	-0.04	-0.64	0.53

\* $P < 0.05$ .

cial responsibility ( $\beta = -0.19$ ,  $P = 0.01$ ), emotional instability ( $\beta = 0.24$ ,  $P = 0.01$ ) and materialism ( $\beta = 0.43$ ,  $P = 0.01$ ). Overall, 40% of the variability in compulsive buying was explained among the combination respondents.

### Ancillary analyses

Several additional analyses were conducted to better understand how undergraduate students manage their credit card debt. Two separate ANOVA models revealed that the way in which debt is repaid is related to the number of credit cards one owns ( $F[2, 625] = 4.57$ ,  $P = 0.01$ ) as well as the amount of one's credit card debt ( $F[2, 604] = 6.20$ ,  $P = 0.01$ ). Pairwise post hoc analyses revealed that those who relied on their parents to pay their debt had fewer credit cards than those who relied on either their employment earnings or a combination of sources (see Table 2). With respect to the amount of debt individuals carried, those who paid their credit balance with income earned from employment had more debt than those who relied on their parents to pay their debt or those who relied on a combination of sources. In addition, for those who paid most of their debt from employment earnings, compulsive buying was found to be positively correlated with the number of credit cards owned ( $r = 0.15$ ,  $P = 0.04$ ). For members



**Table 2** Means and standard deviations (SD) for number of credit cards and amount of debt based on who pays the debt

	Self pays (SD)	Parent pays (SD)	Combination of sources (SD)
Number of credit cards	2.66 (1.89)	2.13 (1.58)	2.50 (1.84)
Amount of debt (in \$)	1078.23 (1880.87)	530.37 (1247.35)	712.68 (1427.63)

of the other two groups, compulsive buying was not correlated either with the number of credit cards owned or the amount of outstanding debt.

## Discussion

We expected financial awareness (financial knowledge, general financial responsibility, money management), future time perspective and financial anxiety to vary as a function of who was responsible for repayment of debt. As hypothesized, college students who were responsible for repayment of their own debt, who found money management to be challenging and who were less future-oriented in their time perspective were more likely to be compulsive buyers. Contrary to our expectations, financial knowledge was not associated with lower levels of compulsive buying, and financial anxiety was not associated with higher levels of compulsive buying.

Across all three groups, higher levels of materialism and emotional instability were associated with higher levels of compulsive buying; however, introversion was not associated with compulsive buying behaviour. This suggests that materialism and emotional instability drive compulsive buying tendencies irrespective of how college students repay their debt. The current study provides support for the relationship between emotional instability, materialism and compulsive buying found in previous studies (Mowen and Spears, 1999; Dittmar, 2005b).

For those who relied on their parents or used a combination of resources to repay their debt, higher financial responsibility levels were associated with lower compulsive buying practices. This result provides further support for past studies that have found financial irresponsibility among compulsive buyers (e.g. Koran *et al.*, 2006). For those that relied on their parents to repay their debt, one variable – sex – emerged that was not found in the other two models. Somewhat surprisingly, it was shown that among college students who relied on their parents to pay their debt, men were more likely to be compulsive buyers than women. Relatively little is known about men who are compulsive buyers. The findings of the current study may provide support for Dittmar's (2005a) notion that compulsive buying is an extreme form of identity-seeking driven by materialistic values and a desire to move towards an ideal self through possessions. Furthermore, men whose parents pay their debts may perceive a larger deficit in their financial identity than women whose parents pay their debt, and thus, men may have greater motivation to prove their financial status through the compulsive purchase of high-status items.

Regression models based on all three forms of debt repayment (self pay, parent pay and combination of resources) accounted for high levels of variance in compulsive buying (42%, 45% and 40% respectively). The current study is one of the first to show that financial variables (responsibility for debt repayment, money man-

agement and financial responsibility) play an important role in compulsive buying behaviour. In particular, money management skills are associated with lower levels of compulsive buying among college students who are responsible for repayment of their own debt. Furthermore, general financial responsibility is also associated with a decrease in compulsive buying, but only among college students whose parents are responsible for paying their debt or students who use a combination of sources for debt repayment. One explanation for this finding is that money management skills are not as important for predicting compulsive buying when a parent is assuming responsibility for some portion of the student's debt. Instead, for this group, financial responsibility, the degree to which the student feels financially responsible for the debt, is the financial variable that predicts compulsive buying.

## Conclusion

Although past studies show a link between risky health behaviours and compulsive buying and high-risk credit use (Adams and Moore, 2007; Norum, 2008), the current study is one of the first to show a direct relationship between future time perspective and compulsive buying. A future time perspective is associated with lower levels of compulsive buying among college students who are responsible for the repayment of their own debt. Students with a future time perspective are more likely to think about and plan for the future, and thus, they may be able to better grasp the long-range negative impact of a 'buy now, pay later' approach to credit management. Since financial variables and future time perspective predict compulsive buying, one means of reducing compulsive buying would be to increase college students' ability to make informed judgments and effective decisions regarding the current and future use of financial resources.

Although college students are aware of their financial limitations and report a desire for financial education (Sallie Mae, 2009), financial education programmes have met with mixed success. For example, in the US, some states (such as Texas) mandate a course in personal finance for high school students, yet college freshmen who completed a personal finance course in high school still scored well below passing on a financial knowledge test with an average score of 35% (Avard *et al.*, 2005). A number of students also report that they learn about personal finances from their parents (Chen and Volpe, 2002). However, parents may be under-informed, and those from low socio-economic backgrounds often have low scores on tests of financial literacy (Mandell, 2008). Furthermore, college students are also more likely to be reactive than proactive when handling financial matters. Hayhoe *et al.* (1999) have argued that once students had accumulated a significant amount of debt, they were more invested in learning about personal financial education. Thus, the motivation to learn about personal finances often increases after the occurrence of a financial problem, not before it takes place. The findings of the current

study suggests that college students' present-oriented time perspective may account for their lack of motivation in handling personal finances.

College students are at high risk for becoming compulsive buyers based on a number of different factors. Their identity is still in the process of development; they have easy access to credit cards, limited financial knowledge, a present-oriented time perspective and they often lack of responsibility for paying their own debt. In light of these characteristics of younger adults, financial service professionals face a significant and unique challenge in attempting to develop effective preventive financial education programs.

The present study is not without limitations. First, although our sample was large and diverse, it was drawn from a single large university. Therefore, the findings may not generalize to other college student populations. Future studies might benefit from including participants from a variety of campuses. A second limitation is that in this study, the college students estimated their financial knowledge rather than completing an objectively scored financial knowledge test. This may explain why we failed to find a relationship between knowledge and compulsive buying. Future studies might consider using a psychometrically validated objective financial knowledge test (such as the Jumpstart Coalition Personal Financial Literacy test – college version) to measure financial knowledge.

The findings from the present study clearly demonstrate that the compulsive buying behaviours of young adults warrants not only attention but also intervention. Spending habits that are acquired during early adulthood often persist throughout an individual's life. Compulsive buying behaviour may result in not only short-term problems in living (e.g. increased stress, depression, low grades, problems with family and friends) but also in longer-term problems such as being denied a job or home loan on the basis of a poor credit report. Public policy initiatives in the US have recently been put in place (such as the Credit Card Responsibility and Disclosure Act of 2009), which not only limit access of credit cards to adults under the age of 21, but also encourage colleges to include financial education as part of the student orientation process. The data from this study suggest that increasing financial literacy may only be part of the answer to reducing the risk of credit debt in future cohorts of young adults. The other part of the solution lies in the identification of those individuals who (based on their unique personality characteristics) are predisposed to compulsive buying, so that intervention steps can be taken before their debt gets out of hand.

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