



## Compulsive Buying: What Is Behind The Curtain?



### Abstract:

Along with the positive aspect of consumers' consumption behaviour, negative aspect also needed to consider for obtaining a complete picture of the consumption behaviour. By examining compulsive buying, this study attempts to shed some light on understanding the negativity in consumption. Based on symbolic self-completion theory, this study investigates the relationships among self-esteem, materialism and compulsive buying. Moreover, the mediating role of materialism in the relationship between self-esteem and compulsive buying, and the role of self-esteem as an antecedent as well as a consequence of compulsive buying are also examined. A survey was carried out on 223 undergraduate students. Structural equation modelling was used to analyse the survey data, which revealed that low self-esteem functions as both an antecedent and as a consequence of compulsive buying. Additionally, self-esteem indirectly and materialism directly affect compulsive buying. It is hoped that, this study contributes significantly in the existing body of literature by examining some previously unexplored relationship. Although compulsive buying may help marketers to gain profit, it is a social problem. Therefore, social marketers, policy makers, advertising agencies, government all parties need to take initiative to aware consumers about its ultimate harmful effect. Implications and suggestions for future research are also discussed.

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### 1. Introduction:

Compulsive buying refers to uncontrolled and excessive purchase behavior which exhibits the negative side of consumption (Dittmar, 2005a; Elliott, 1994; Faber & O'Guinn, 1992; O'Guinn & Faber 1989). Understanding the negative aspects of consumption is crucial, since, studying only the positive aspect fails to provide complete information of consumer behavior (Faber & O'Guinn, 1988; Faber & O'Guinn, 1992). However, research that addresses negativity in consumption is less numerous compared to the studies that focuses on the positive side.

Self completion theory (Wicklund & Gollwitzer, 1981) suggests that, individuals often engage in compensating activities that may reduce the discrepancy between the *actual-self* and the *desired-self*. Such discrepancy may results in feeling of 'incompleteness' or low-esteem which motivates a consumer to obtain more earthly

possessions (materialistic tendency) in search of 'completeness' or to reach the *desired-self* status (Wicklund & Gollwitzer, 1982; Yurchisin & Johnson, 2004). Hence, it is likely that, self-esteem and materialism are two important drivers of compulsive buying. In the past literature, some researchers found self-esteem as a driver of



compulsive buying (Faber & O'Guinn, 1992; O'Guinn & Faber 1989) while few other researchers considered it as a consequence of the compulsive consumption (DeSarbo & Edwards, 1992; Elliot, 1994). Therefore, it is necessary to understand the role of self-esteem by considering it as the antecedent as well as the outcome in one model. Although past studies examined the direct effect of self-esteem on materialism (Park & John, 2011) as well as the effect of materialism on compulsive buying (Dittmar, 2005b; Yurchisin & Johnson, 2004), the mediating role of materialism between self-esteem and compulsive buying is yet to be tested. The present study is such an effort to fill these gaps.

The objectives of the present study are (i) to examine the direction between self-esteem and compulsive buying, (ii) to investigate the relationship between materialism and compulsive buying, and (iii) to verify the mediating role of materialism between self-esteem and compulsive buying. It is expected that this research contributes significantly in theory as well as in practice. Theoretically, the present study verifies few new relationships among the study variables. On the other hand, this study sheds some light on consumers' negative consumption behaviour which certainly will benefit the marketing managers. The rest of the paper briefly discusses the literature related to the study constructs and develops study hypotheses. Next, methodology carried in the present study is explained in short. Lastly, findings, conclusion, managerial implications and future research directions are discussed.

## **2. Theoretical Background:**

### *2.1. Compulsive buying:*

In recent years, compulsive buying became a global concern (Black, 2007). Researchers from several countries have evoked this issue such as in US (DeSarbo & Edwards, 1996; McElroy, 1994; Roberts, 1998), in Germany (Neuner, Raab, & Reisch, 2005; Scherhorn, Reisch, &

Raab, 1990), in France (Lejoyeux, Hourtane, & Ades, 1995), in Canada (D'Astous, 1990; Valence, d'Astous, & Fortier, 1988), in Australia (Lyons & Henderson, 2000), in England (Dittmar, 2005a; Elliott, 1994), and in Brazil (Bernik, Akerman, & Amaral, 1996). Dittmar and Drury (2000) have reported that two to five percent adults are affected by compulsive buying in the Western economy. It is found that in America about 18 million Americans are subject to compulsive consumption (Workman & Paper, 2010). Another study suggests that one in twenty Americans suffer from compulsive buying (Addiction Help Center, 2012). This trend is more prevalent among the young consumers (Elliot, 1994; Roberts, 1998; Yurchisin & Johnson, 2004). Typically it refers as a chronic and repetitive shopping behavior which is difficult to stop, derived from psychological tension and accompanied by a feeling of relief (Black, 2007; Elliot 1994; Mueller, Mitchell, Mertens, Mueller, Silbermann, & Burgard, 2007; O'Guinn & Faber, 1989). Different authors have termed it in different ways such as compulsive consumption (Faber, O'Guinn, & Reymond, 1987; Faber & O'Guinn, 1988), compulsive buying (Faber & O'Guinn, 1992; Manolis & Roberts, 2008; Xu, 2008) and addictive consumption (Elliott, 1994; King 1981). The differences in conceptualization of the compulsive buying construct by different authors are shown in Table 1. Regardless of the differences in its labeling, such behavior indicates the dysfunctional aspect of buying behavior particularly for products (D'Astous, 1990). It often causes emotional distress and is linked to several negative emotions, like guilt, shame and regret (Kukar-Kinney, Ridgway, & Monroe, 2009; O'Guinn & Faber 1989). Moreover, it may lead to serious financial debt (Christenson, Faber, deZwaan, Raymond, Secker, Ekern, Mackenzie, Crosby, Crow, Eckert, Mussell, & Mitchell, 1994; Dittmar 2005b; Edwards, 1993).



**Table 1: Conceptualization of compulsive buying construct in past selective studies**

Author and year	Definitions
Ullman and Krasner (1969)	A behavior is considered compulsive when it results from compelling impulses or urges and is inappropriate or disruptive.
Faber et al. (1987: 132)	Compulsive buying is a type of consumer behavior which is inappropriate, typically excessive, and clearly disruptive to the lives of individuals who appear impulsively driven to consumer.
O'Guinn and Faber (1989: 155); Faber and O'Guinn (1992)	CB is chronic, repetitive purchasing that becomes a primary response to negative events or feelings.
D'Astous and Tremblay (1989: 2)	Compulsive buying is an extreme case of generalized urge to buy.
Edwards (1993)	Compulsive buying is an abnormal form of shopping and spending in which the afflicted consumer has an overpowering, uncontrollable, chronic and repetitive urge to shop and spend, compulsive spending characteristically functions as a means of alleviating negative feelings of stress and anxiety.
Elliot (1994: 159)	It is situation when consumers buy for the motives which are not directly related to actual possessions of goods and who persistently repeat the behavior despite its leading to severe financial and social consequences.
McElroy et al. (1994)	Compulsive buying is an uncontrollable, distressing, time consuming shopping behavior that produces financial difficulties.
The Concise Oxford Dictionary (1995: 274)	To be compulsive is to be irresistible compelling or resulting or acting from compulsion against one's conscious wishes.
Monahan et al. (1996)	Compulsive buying is characterized by an irresistible urge to buy and some form of tension relief (or gratification) after a purchase.
Bearden and Netemeyer (1999: 52)	Compulsive buying is typified by chronic buying episode in which the consumer feels unable to stop.
Dittmar and Drury (2000: 112)	Compulsive buying is a deviant activity, qualitatively distinct from ordinary consumer behaviour, and in common with the other models it cannot explain why only certain goods are bought impulsively and excessively.
Miltenberger et al. (2003)	Compulsive buying is a disorder which tends to occur when a person suffers from negative emotions.
Dittmar (2004b)	The impulse to buy is experienced as irresistible, individuals lose control over their buying behaviour, and they continue with excessive buying despite adverse consequences in their personal, social, or occupational lives, and financial debt.
Jalees, (2007)	Compulsive buying is a spending addiction in which "one devotes or surrenders oneself to something habitually or obsessively, behavior that impairs and effects the performance of a vital function, a harmful development".
Black (2007: 14)	Compulsive buying disorder (CBD) is characterized by excessive shopping cognitions and buying behavior that leads to distress or impairment.
Mittal et al. (2008)	It is a chronic tendency to purchase products far in excess of a person's needs and resources.
Ridgway, Kukar-Kinney, and Monroe (2008)	Compulsive buying refers to a consumers' tendency to be preoccupied with buying that is revealed through repetitive buying and a lack of impulse control over buying.
Billieux et al. (2008)	Compulsive buying is uncontrolled and excessive purchases leading to personal and family distress.

**Note:** Compiled by the researchers



Due to its negative impact on psychological, social and financial aspects, a body of marketing research has evolved over last two decades in exploring and in examining the antecedents and consequences of this negative consumption behavior (see Faber et al., 1987; Faber & O'Guinn, 1992; Fah, Foon, & Osman, 2011; Edwards, 1993; Manolis & Roberts, 2008; Roberts, 1998). Although compulsive buying phenomenon has been extensively studied in the field of psychology in relation to eating disorder and addiction to drugs and alcoholism (Donovan, 1988; Glatt & Cook, 1987; Marlatt, Baer, Donovan, & Kivlahan, 1988; McElroy, Satlin, Pope, & Keck, 1991; Mitchell, Redlin, Winderlich, Crosby, Faber, & Miltenberger, 2002; Nathan, 1988; Williamson, 1990), only in late 1980s Faber et al. (1987) started to examine this issue in relation to understanding the consumer behavior. In understanding the compulsivity in drugs and alcohol addiction in the psychology literature, the 'social learning theory' and 'disease theory and biological factors' are often considered (Becker, 1953, 1969; Donovan, 1988; Hirschman, 1992; Ray 1961; Petrakis, 1985; Tabakoff & Rothstein, 1983). However, these theories provide meaningful explanations in comprehending the extreme compulsive buying behavior which certainly requires clinical treatment to overcome. Conversely, the present research purposively ignores such clinical extreme disorders and considers compulsive buying from a daily life common problem. Therefore, for this study, the theory of *symbolic self-completion* (Gollwitzer, 1986; Wicklund & Gollwitzer, 1981; Wicklund & Gollwitzer, 1982) is considered more suitable to justify this behaviour.

Based on the symbolic self-completion theory, individuals define themselves based on their own desire and expectations which is called *self-definition* of one's self. Moreover, an individual wants others to recognize that he/she possesses a particular self-definition (Wicklund & Gollwitzer, 1982). To be acknowledged by others in terms of particular self-definition, individuals often engage in such behaviours that help symbolizing their self-definition, for example, purchasing specific brands, wearing or

displaying specific products, etc. (Wicklund & Gollwitzer, 1981; Yurchisin & Johnson, 2004). However, often there is a discrepancy between *desired-self* and *actual-self*. Actual-self represents the current state of an individual whereas, the desired-self refers to the expected state in which he/she wants to belong. In this instance, individuals search for symbols that they think will help to reach to their desired-self. Therefore, these individuals actively engage in possessing and acquiring such materials that symbolize their desired state of own-self. Thus, theory of self-completion provides the idea to consider materialism and self esteem as two important antecedents of compulsive buying.

## 2.2. Materialism

The notion of materialism can be defined "as the importance ascribed to the ownership and acquisition of material goods in achieving major life goals or desired states" (Xu, 2008, p. 39). Materialistic individuals tend to acquire possessions than those who are low in materialism (Richins & Dawson, 1992) and prioritize acquisition more compared to other life goals (Fromm, 1976; Schudson, 1984). It is important to note that, materialistic individuals perceive that material possession will make them happy and satisfy. However, in most of the cases the pleasure of a new purchase are quickly faded and a new acquisition desire takes place which creates a dissatisfaction and discontentment cycle (Belk, 1984; Brickman & Campbell, 1971; Richins, 1987; Scitovszky, 1976).

Indeed, material possession is considered as a significant way to symbolize one's self to the desired state. Individuals continue purchase the symbolic materials until they feel that they have attained their desired-self stage and acknowledged by others. Unfortunately, some individuals constantly self-symbolize and do not stop and thus this process continues (Wicklund & Gollwitzer, 1981; Yurchisin & Johnson, 2004). In this respect, compulsive buying can be partly explained by high materialistic view.

## 2.3. Self-esteem:

Personality trait such as low self-esteem also contributes significantly in theorizing and



predicting compulsive buying behaviour (O'Guinn & Faber, 1989; Roberts, 1998; Workman & Paper, 2010). It refers to "individual's self-evaluation (approval or disapproval) and the extent to which the person believes himself (herself) worthwhile" (DeSarbo & Edwards, 1996, p. 236). According to the symbolic self-completion theory, when individuals suffer from the discrepancy between their desired-self and actual-self, they experience low self-esteem which eventually leads them to acquire symbolic possessions more and more with the motive to reach at the desired-self. In another note, Faber (1992) suggested that, feeling of low self-esteem and inadequacy at adolescence stage leads individuals to be addictive towards certain product consumption.

It is argued that, although compulsive buyers may seek self-esteem via the shopping and spending activity which ultimately leads toward addiction, self-esteem also may act as a consequence of the order of this addiction (DeSarbo & Edwards, 1996). Individuals tend to feel guilt due to their inability in controlling their excessive purchasing behaviour (O'Guinn & Faber, 1992). Therefore, it is expected that the higher the compulsive buying, the lower the individual's self-esteem.

#### 2.4. Conceptual framework:

As mentioned before, high materialistic view may positively affect compulsive buying. In a qualitative study, Dittmar and Drury (2000) found that some consumers have the tendency to be engaged in heavy earthly consumption to shed mask to their feelings of self discrepancy. It can

be explained by the help of self completion theory which suggest that, when the perception of *actual-self* is lower than the *desired-self*, it creates low self-esteem which in turn leads the consumers to purchase such materials which can enhance the status of their *actual-self*. Furthermore, Dittmar, Beattie, and Friese's (1996) work suggests that highly materialistic consumers purchase material on a continuous basis without realizing that they already purchased sufficient materials. In this regard, self-esteem may be considered as an antecedent of materialism, whereas, materialism acts as an antecedent of compulsive buying.

Excessive consumption has its negative impact on consumers' spending (Christenson et al., 1994) which may end up with mounting of debt (Edwards, 1993; Faber & O'Guinn, 1988) and psychological sufferings such as feeling of guilty and regret (Kukar-Kinney et al., 2009). In support of this view DeSarbo and Edwards (1996) suggested that self-esteem or the evaluation of self may be the function of compulsive buying since, excessive purchase may result in guilty feeling due to the lack of control in purchase. Conversely, some other researchers have perceived self esteem as an antecedent of compulsive buying (Faber & O'Guinn, 1988; Jalees, 2007; Yurchisin & Johnson, 2004). Considering these both perspectives, the present research examines the role of self-esteem in relation to compulsive buying as an antecedent as well as a consequence. In Table 2, a summary of some relevant literature is shown.



**Table 2: A summary of some relevant literature**

Author & year	Objectives	Methods	Findings
Park & John (2011)	To examine whether the discrepancies between implicit and explicit self-esteem are an important driver of materialism.	USA 4 studies have been conducted <u>Study 1</u> : 96 undergraduate students participated <u>Study 2</u> : 44 undergraduate students participated <u>Study 3</u> : 137 undergraduate students participated <u>Study 4</u> : 136 students participated. Hierarchical regression analysis was used.	Study 1 illustrates the link between self-esteem discrepancy and materialism. Studies 2 and 3 show that increases (decreases) in self-esteem discrepancies cause increases (decreases) in materialism. Study 4 confirms the link between self-esteem discrepancy and the desire to self-enhance through material possessions.
Xu (2008)	To investigate young consumers' compulsive buying (CB) tendency from the perspective of psychological motivation.	US Convenience sampling N=96 Undergraduate college students Used SEM	Materialism was found to have a significant & direct influence on young consumers' CB. Public self-consciousness was strongly related to young consumers' CB. The influence of public self-consciousness on CB was mediated by materialism.
Dittmar (2005a)	To develop and to test a model that considers self-discrepancies (SelfD) and materialistic value (Mat) as two antecedents of compulsive buying (CB).	UK Young consumers 1 qualitative exploration (N=29 women) 2 quantitative survey (N=239 & N=126 undergrad students)	For young men, materialistic value was a predictor of CB. For young women, materialism (Mat) and self-discrepancies (selfD) both factors found to be the significant predictors of CB. Ideal self-buying motivation mediated the relationship between Mat and CB as well as between selfD and CB.
Yurchisin & Johnson (2004)	To investigate the relationships between CB and perceived social status associated with buying, materialism, self-esteem, and apparel-product involvement.	US Age group: 18 and 24 were surveyed  305 undergrad students Convenience sampling Multiple linear regression	The CB behavior of participants was negatively related to self-esteem and positively related to perceived social status associated with buying, materialism, and apparel-product involvement.
Roberts (1998)	To investigate the incidence, antecedents, consequences of CB among college students.	US College students Baby Bust generation Random sampling Age group: 18-24 Hierarchical multiple regression was used.	Self-esteem, perceived social status, gender, shopping, and television viewing all are directly linked to CB.
DeSarbo & Edwards (1996)	To present a theoretical framework that posits compulsive buying behavior as a function of various psychological process & personality traits.	USA 104 from 1 <sup>st</sup> sample (convenience sampling) 101 from the 2 <sup>nd</sup> sample (systematic random sampling). Constrained maximum likelihood cluster wise regression procedure was used.	Compulsive buyers are clustered into two groups in terms of their different drivers. Impulsiveness, excitement seeking, materialism, dependence and denial were correlated with CB.



Elliott (1994)	To extend the knowledge of addictive consumption in UK	UK In-depth interview of 15 women Followed by a mail survey of 46 self-identified compulsive shoppers.	The prime function of addictive consumption to boost up mood & to increase the ability to match perceptions of socially desirable or required appearance. Self-esteem & CB were negatively correlated.
D'Astous (1990)	To investigate the nature of CB in a general population	Canada French – Canadian population N=190 consumers Probability sampling Correlation & ANOVA were used.	CB tendency negatively correlates with age and self-esteem. On the other hand, CB positively correlates with one's susceptibility to social influence. Early consumption experience may affect significantly the extent of compulsive like buying behavior.
D'Astous et al. (1990)	To test several hypotheses related to compulsive buying tendencies in the adolescent consumer population.	Canada Survey of 394 French-Canadian adolescents. Age group: 13-19 years old. Correlation & Regression were used.	Influence of mass media, peer influence, parents' compulsiveness, and gender positively influence CB. On the other hand, self-esteem, family communications, rationality, father's social status negatively related to CB.

*Note:* CB refers to compulsive buying

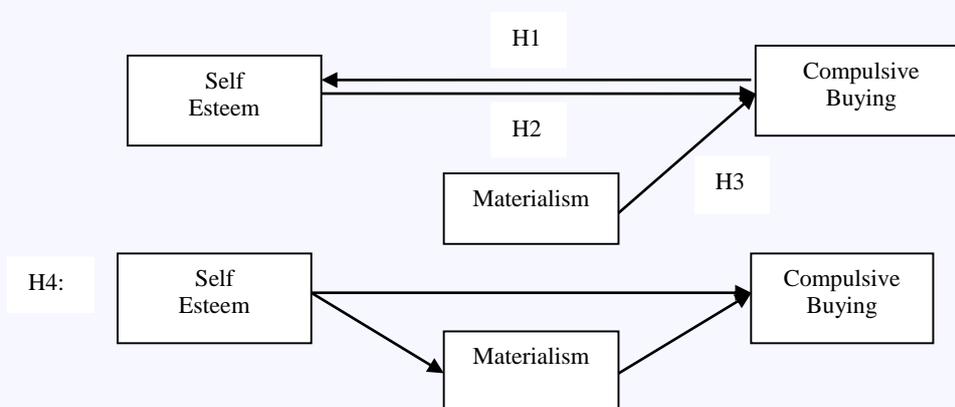
Table 2 exhibits the examined relationships among compulsive buying, materialism and self-esteem in past studies. It is evident that, materialism and self-esteem are treated as predictor of compulsive buying but the mediating role of materialism in the relationship between self-esteem and compulsive buying is yet to be

tested. Moreover, past research suggested that self-esteem can play the role as an antecedent as well as a consequence of compulsive buying, but yet to the author's knowledge, exploring this both directional hypotheses is yet to be verified. Based on these discussions, the following hypotheses are developed:

- H1: Self-esteem has a significant negative effect on compulsive buying.
- H2: Compulsive buying has a significant negative effect on consumers' Self-esteem.
- H3: Materialism has a significantly positive effect on consumers' compulsive buying.
- H4: Materialism partially mediates the relationship between self-esteem and compulsive buying.

### 2.5. Conceptual model:

The proposed relationships among study variables are shown in Figure 1.



**Figure 1.** Proposed relationships among the study variables



### 3. Methodology:

#### 3.1. Measures:

All study constructs were measured using a five-point Likert-type scale ranging from 1=strongly disagree to 5=strongly agree. This study utilized Faber and O'Guinn's (1992) widely used compulsive buying scale to measure compulsive buying which indicate specific behaviors and feelings related to compulsive buying. Self-esteem scale was borrowed from Rosenberg (1965) and, materialism scale was adapted from Jalees (2007).

#### 3.2. Sample, sampling technique and data collection:

Since the aim of this study is to contribute to the existing body of knowledge by verifying some of the new links, and not to achieve the accuracy of population estimates, a non-probability sampling technique was utilized (Calder, Phillips, & Tybout, 1981; Diamantopoulous & Schlegelmilch, 1997). Data were collected from a private university in Malaysia using a

structured questionnaire. Past studies revealed that, early adulthood is the period when compulsive buying behavior found to be high (Christenson et al., 1994; Schlosser, Black, Reperntinger, & Freet, 1994; Yurchisin & Johnson, 2004) questionnaires were distributed among the undergraduate students which yielded 223 completed questionnaires.

#### 3.3. Profile of the respondents:

Among 223 respondents, 94 were female and 129 were male. Most of the respondents were between 18 to 22 years old and the rest was between 23-27 years old. 98.2 percent were single and only 1.8% were married. 74% were Chinese, 11.7% were Malay, and 5.4% were Indian. Most of the respondents are between 18 to 27 years old. Forty-three percent of the respondents mentioned that their monthly disposable income (or pocket money) falls between RM501 to RM1000, whereas 43% had less than RM500 disposable income. The profile of the respondents is shown in Table 3.

**Table 3:** Respondent's Characteristics

Characteristics	Frequency	Percentage (%)
<b>Gender</b>		
Male	94	42.2
Female	129	57.8
<b>Age</b>		
18-22	191	85.7
23-27	31	13.9
> 27	1	00.4
<b>Ethnicity</b>		
Malay	26	11.7
Chinese	165	74.0
Indian	12	5.4
Others	20	9.0
<b>Marital status</b>		
Single	219	98.2
Married	4	1.8
<b>Monthly disposable income</b>		
< RM500	96	43.0
RM501-RM1000	97	43.5
RM1001-RM1500	17	7.6
RM1501-RM2000	6	2.7
> RM2000	7	3.1

Note: N = 223



## 4. Results and Discussions:

### 4.1. Descriptive statistics and correlations:

Variables' means, standard deviations, zero-order correlations, and Cronbach's alpha coefficients are shown in Table 4.

**Table 4:** Mean, standard deviations, correlations and Chronbach's alpha coefficients

Variable	<i>M</i>	<i>SD</i>	1	2	3
1. Compulsive Buying	2.229	.628	(.704)		
2. Materialism	3.366	.767	.274**	(.706)	
3. Self-esteem	3.079	.669	-.473**	-.357**	(.846)

**Note:** *N* = 223. Cronbach alphas are in parentheses on the diagonal. \*\*correlation is significant at the 0.01 level (2 tailed).

### 4.2. Measurement model:

Following the Anderson and Gerbing's (1988) two steps approach, CFA was utilized for the overall measurement model. The results of goodness of fit measures indicated a well-fitting model with  $\chi^2/df = 1.857$ ; GFI = 0.913; TLI =

0.959; CFI = 0.966; IFI = 0.966; NFI = 0.930, and RMSEA = 0.062. Factor loadings for the full measurement model are shown in Table 5. In the next stage, the convergent and discriminant validity were established.

**Table 5:** Items and their factor loadings

	Factors/ Items	Standard Loading
	<b><u>Compulsive buying</u></b>	
CB1	I bought something and when I got home I wasn't sure why I had bought it.	.891
CB2	I just wanted to buy things and didn't care what I bought.	.531
CB3	I bought things even though I couldn't afford them.	.833
CB4	I wrote a cheque when I didn't have enough money in the bank to cover it.	.766
CB5	If I have money left at the end of the day, I just have to spend it.	.894
CB6	I felt anxious or nervous on days I didn't go for shopping.	.547
CB7	I bought something to make myself feel better.	.523
	<b><u>Materialism</u></b>	
MAT8	It is important for me to have really nice things.	.817
MAT9	I would like to be rich enough to be able to buy anything I want.	.602
MAT10	I would be happier if I could afford to buy more things.	.717
	<b><u>Self-Esteem</u></b>	
SE11	I feel that I am a person of worth, at least on an equal plane with others(R).	.901
SE12	I feel that I have a number of good qualities(R).	.949
SE13	All in all, I am inclined to feel that I am a failure.	.504
SE14	I am able to do things as well as most other people(R).	.533
SE15	I feel I do not have much to be proud of.	.610
SE16	I take a positive attitude toward myself(R).	.909
SE17	On the whole, I am satisfied with myself(R).	.913
SE18	I wish I could have more respect for myself.	.589
SE19	I certainly feel useless at times.	.713
SE20	At times I think I am no good at all.	.842



#### 4.3. Convergent and discriminant validity:

For the present study, Chronbach's alpha coefficients of compulsive buying, self-esteem, and materialism were above the recommended level of 0.7 (Nunnally, 1978). These values are shown in the Table 5 below. Average variance extracted (AVE) and composite reliability for each construct was above the threshold level 0.5

and 0.7 respectively (Hair, Black, Babin, Anderson, & Tatham, 2006). All these tests results established the convergent validity (see Table 6). Furthermore, all factors were loaded adequately to their relevant constructs ranging from 0.504 to 0.949 which indicates the presence of the convergent validity (Anderson & Gerbing, 1988).

**Table 6:** Test result of composite reliability and AVE

Constructs	Chronbach's alpha coefficients	Composite Reliability	Average Variance Extracted
<b>Threshold level</b>	<b>&gt;0.7</b>	<b>&gt;0.7</b>	<b>&gt;0.5</b>
Compulsive buying	0.704	0.884	0.533
Materialism	0.706	0.758	0.515
Self-esteem	0.812	0.930	0.591

Discriminant validity was established by comparing the fit of unconstrained measurement model to alternative models in which two latent constructs were constrained at a time by setting their correlations equal to one (Lavelle, Brockner, Konovsky, Price, Henley, Taneja, & Vinekar, 2009). Using this approach the

discriminant validity is affirmed if the  $\chi^2$  value for the unconstrained measurement model is significantly lower than the constrained alternative models (Bagozzi & Philips, 1982; Lavelle et al., 2009). The discriminant validity test results are shown in the Table 7.

**Table 7:** Discriminant validity test results

Model	$\chi^2$	df	$\Delta \chi^2$	$\Delta df$	GFI	CFI	TLI	RMSEA
2-Factor Model (Model 1)	256.003	88			0.873	0.924	0.909	0.093
3-Factor Model (Model 2)	161.523	87			0.913	0.966	0.959	0.062
1-Factor Model (Model 3)	300.518	90			0.863	0.904	0.888	0.103
Difference (Model 1-2)			94.48*	1				
Difference (Model 3-2)			138.48*	3				

Note:  $*\Delta\chi^2 > 3.84$ ,  $df = 1$

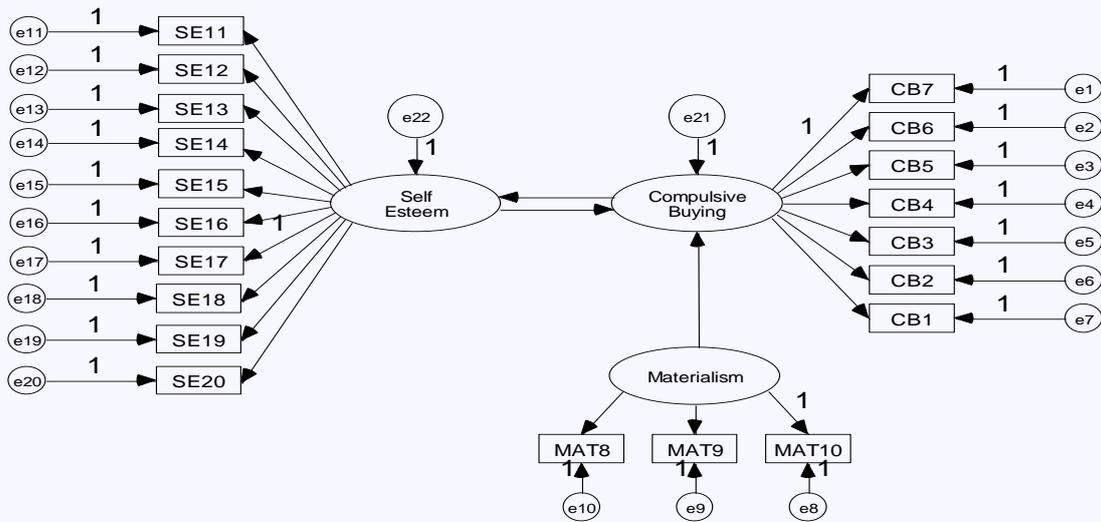
In each case, the chi-square difference test was found to be significant ( $\Delta\chi^2 > 3.84$ ,  $df = 1$ ), which indicate that the measurement model fits the data better than all other alternative models. Thus, discriminant validity is assured.

#### 4.4. Tests of hypotheses:

Structural equation model was used to test the study hypotheses. For the full structural model, the overall evaluation of the fit was based on multiple indicators which showed acceptable model fit with  $\chi^2/df=3.722$ ; GFI=0.913;

TLI=0.937; CFI=0.947; IFI=0.948, NFI=0.930; and RMSEA=0.078. Figure 2 shows the structural coefficients for the full model, which indicates that compulsive buying significantly, negatively and directly affect self-esteem ( $H_1$ :  $\beta=-0.408$ ,  $p<0.05$ ) and self-esteem also significantly, directly and negatively affect compulsive buying ( $H_2$ :  $\beta=-0.309$ ,  $p<0.001$ ). Thus,  $H_1$  and  $H_2$  both are supported. Moreover, materialism is found to be an antecedent of compulsive buying ( $H_3$ :  $\beta=0.435$ ,  $p<0.01$ ). Therefore, hypothesis  $H_3$  is supported.





$\chi^2/df=3.722$ ; GFI=0.913; TLI=0.937; CFI=0.947; IFI=0.948, NFI=0.930; and RMSEA=0.078.  
 Note: \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$

**Figure 2.** Structural equation model representing the relationships among the variables

To examine the mediation effect that is to test H4, model comparison was made. In this stage, Baron and Kenny's (1986) suggested conditions for testing mediation effect were examined. According to them, (i) the predictor variable needs to affect the mediator, (ii) the predictor variable needs to affect the dependent variable, and (iii) the mediator variable needs to affect the dependent variable. If all of these conditions are met, the effect of the predictor variable on the dependent variable should be less or insignificant. The former situation indicates the existence of partial mediation whereas, the later represents full mediation.

Correlation coefficients indicated that self-esteem was significantly correlated with the

dependent variable compulsive buying ( $r = -0.473^{**}$ ) and with the mediator variable materialism ( $r = -0.357^{**}$ ). Furthermore, materialism was also significantly correlated with compulsive buying ( $r = 0.274^{**}$ ). All of these results indicate that the first three conditions are met (see Table 3). Next, to test the fourth condition, the fit of the alternative models to the hypothesized mediation model was compared. For 1 degree of freedom, the significance level of Chi-square differences test was considered at 3.841 (the level of 0.05) to test the mediation effects (Levine et al., 2002). The findings suggest the appropriateness of the partially-mediated model (see Table 8).



**Table 8:** Results of model comparison for the mediated model

Model	$\chi^2$	df	$\Delta \chi^2$	$\Delta df$	GFI	CFI	TLI	RMSEA
Full Mediation (Model 1)	328.051	88			.912	.947	.937	.078
Partial Mediation (Model 2)	323.774	87			.913	.948	.938	.078
Non-mediation (Model 3)	362.168	88			.904	.939	.927	.084
Difference (model 1-2)			4.277*	1				
Difference (model 3-2)			38.394*	1				

Note:  $*\Delta\chi^2 > 3.84$ ,  $df = 1$

In Table 8, the results of the chi-square differences test indicated a significant improvement of fit of the partially-mediated model ( $\Delta\chi^2 = 4.277$ ,  $p < 0.001$ ). The partially-mediated model also indicated a significant improvement of the non-mediated model ( $\Delta\chi^2 = 38.394$ ,  $p < 0.001$ ). Hence, the findings suggested that the hypothesized partially mediated model was a better fit with  $\chi^2/df = 3.722$ ; GFI = 0.913; CFI = 0.948; TLI = 0.938; and RMSEA = 0.078. Thus, H4 is supported.

## 5. Conclusions:

The present study attempts to shed some light on two unveiled relationships among self-esteem, materialism and compulsive buying which certainly contributes to the new knowledge in the field of consumer behavior. This study investigates the direction between self-esteem and compulsive buying by considering self-esteem as an antecedent as well a consequence of compulsive buying. The study findings reveal that, self-esteem is a significant predictor as well as the consequence of compulsive buying. Furthermore, self-esteem is found to be an antecedent of materialism which is a new link. This relationship can be explained by the fact that a person with high self-awareness is likely to depend on materialistic value as the way of improving or modifying his or her own social status. However, excessive shopping in-turn creates low self-esteem.

The study results put forward the idea that materialism significantly, directly and positively affect compulsive buying. Past studies also support this finding (see Dittmar, 2005a; Dittmar, 2005b; Roberts, 2000; Xu, 2008). It can be explained by the facts that, the young consumers consider compulsive buying as a symbolic self-completion strategy in which they try to enhance the discrepancy between actual

and desired self by engaging in excessive purchase.

Data also suggest that self-esteem has indirect impact on compulsive buying. In other words, it is found that materialism partially mediates the relationship between self-esteem and compulsive buying. When individual's self-esteem is low, he/she engages in high material consumption which eventually leads them to become compulsive shopper. It also supports the notion of symbolic self-completion theory. Indeed, the psychological conflict arises when there is a discrepancy between actual-self and desired-self which engenders low self-esteem. To overcome such low self-esteem, individuals tend to indulge in purchasing symbolic goods that may lift their actual-self. Ultimately, it tends to be the chronic habit to purchase excessively.

In a nutshell, it is likely that, compulsive buying occurs due to the lack of proper psychological balance such as lack of strong self-esteem which eventually drives individuals to engage in purchasing the symbolic goods or services that may enhance their *actual-self* to *desired-self*. This motive leads the consumers to buy more earthly material goods without considering the condition of their wallet.



## **6. Implications, Limitations and Future Research Directions:**

The study of negative consumer behaviour is crucial since such behaviours may lead to devastating individual, social, psychological and financial maladies (see Christenson et al., 1994; Dittmar, 2005a; Edwards, 1993; Kukar-Kinney et al., 2009; O'Guinn & Faber, 1989; Workman & Paper, 2010). Such ill consequences a not only call for more research to conduct in understand the phenomenon deeper, but also requires marketers attention to help control this issue. By considering the negative effects of such behavior, marketers need to provide sufficient information for the consumers to educate them about the negative consequences of excessive shopping. Moreover, instead of enticing the consumers through illusive advertisements, advertisement agencies need to provide balanced information.

It is argued that marketers consciously or unconsciously may influence shopping craze among compulsive buyers which may ends up with psychological, financial and/or social problems (Workman & Paper, 2010). Additionally, the mass media (Faber & O'Guinn, 1988; D'Astous, 1990; D'Astous, Maltais, & Roberge, 1990; Roberts, 1998), credit card facility (Barron, 2012; Bragg, 2009; McElory, Keck, Harrison, Pope, Smith, & Strakowski, 1994), the wave of globalization and internet facilities have fuelled the compulsive buying tendencies. In this marketing era of social responsibility (Kerin, Hartley, & Rudelius, 2011), social marketers need to take initiatives to manage and to control this issue. They can provide consumer education regarding this matter through social advertisement utilizing mass media. They may bring financial counsellors or psychiatrists in television to discuss about the devastating consequences of

compulsive buying. Educative talk shows also can be arranged where celebrity and non-celebrity compulsive buyers can be invited to discuss this issue.

Not only social marketers, but also government and other policy makers also need to collaborate to promote awareness programs to make young consumers aware regarding the harmful consequences of compulsive buying. Personal responsibility development programs can be launched in this regard. Personal responsibility is the state of being responsible to oneself and to the needs and well-being of others (Ruyter, 2002). Literature in psychological and behavioral science suggest that if adolescents are able to develop the sense of personal responsibility, they may take better decisions in every aspect of life which eventually helps themselves and the others as they mature (Maruyama, Fraser, & Miller, 1982; Olthof, Ferguson, & Luiten, 1998; Schulz & Cheng, 2002).

Although the present study provides some useful understanding regarding the compulsive buying phenomenon, it is not free of its limitation. Particularly, this study employed a cross-sectional approach in collecting data which may be better understood by utilizing a longitudinal approach. Thus, future research can design a longitudinal study to further verify the present study findings. Since, compulsive buying is predominantly examined in the goods based literature, future research can study this negative consumption aspect in the service sector. Furthermore, different context may also be examined, such as offline versus online shopping behavior to compare the similarity and dissimilarity of consumption pattern in these two different shopping contexts.



## Reference:

- Addiction Help Center. (2012). Men and shopping addiction. Retrieved from <http://www.addictionhelpcenter.com/men-and-shopping-addiction/> (Accessed on 12 October, 2012).
- Anderson, J. C., & Gerbing, W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423.
- Bagozzi, R. P., & Phillips, L. W. (1982). Representing and testing organizational theories: A holistic construal. *Administrative Science Quarterly*, 27(3), 459-489.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173- 1182.
- Barron, K. (2012, March 25). Digging out of debt. *Los Angeles Times*. Retrieved from <http://articles.latimes.com/2012/mar/25/business/la-fi-out-of-debt-20120325> (Accessed on 1 October, 2012).
- Becker, H. S. (1953). Becoming a marijuana user. *Journal of Sociology*, 59, 235-242.
- Becker, H. S. (1969). Social bases of drug-induced experiences. In A. R. Lindesmith & A. L. Strauss (Eds.), *Readings in social psychology* (pp. 176-191). New York: Holt, Rinehart & Winston.
- Belk, R. W. (1984). Three scales to measure constructs related to materialism: Reliability, validity, and relationships to measures of happiness. *Advances in Consumer Research*, 11, 291-297.
- Black, D. W. (2007). A review of compulsive buying disorder. *World Psychiatry*, 6(1), 14–18.
- Bernik, M. A., Akerman, D., & Amaral, J. A. M. S. (1996). Cue exposure in compulsive buying. *Journal of Clinical Psychiatry*, 57(2), 90.
- Bragg, J. (2009, September 21). Digging Out From \$80,000 in Debt. *CNN Lining*. Retrieved from [http://articles.cnn.com/2009-09-21/living/mainstreet.digging.out.of.debt\\_1\\_balances-from-one-card-credit-cards-debt-management-program?\\_s=PM:LIVING](http://articles.cnn.com/2009-09-21/living/mainstreet.digging.out.of.debt_1_balances-from-one-card-credit-cards-debt-management-program?_s=PM:LIVING) (Accessed on 10 September, 2012).
- Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. H. Appley (Eds.), *Adaptation-level theory* (pp. 287-302). New York: Academic Press.
- Calder, B. J., Phillips, L. W., & Tybout, A. M. (1981). Designing research for application. *Journal of Consumer Research*, 8(September), 197-207.
- Christenson, G. A., Faber, R. J., deZwaan, M., Raymond, N. C., Secker, S. M., Ekern, M.D., Mackenzie, T. B., Crosby, R. D., Crow, S. J., Eckert, E. D., Mussell, M. P., & Mitchell, J. E. (1994). Compulsive buying: Descriptive characteristics and psychiatric comorbidity. *Journal of Clinical Psychiatry*, 55(1), 5-11.
- D'Astous, A. (1990). An inquiry into the compulsive side of 'normal' consumers. *Journal of Consumer Policy*, 13(1), 15-31.
- D'Astous, A., Maltais, J., & Roberge, C. (1990). Compulsive buying tendencies of adolescent consumers. *Advances in Consumer Research*, 17, 306-312.
- DeSarbo, E. S., & Edwards, E. A. (1996). Typologies of compulsive buying behavior. *Journal of Consumer Psychology*, 5(3), 231-262.
- Diamantopoulos, A., & Schlegelmilch, B. B. (1997). *Taking the fear out of data analysis*. London: Dryden.



- Dittmar, H. (2005a). A new look at “compulsive buying”: Self–discrepancies and materialistic values as predictors of compulsive buying tendency. *Journal of Social and Clinical Psychology*, 24(6), 832-859.
- Dittmar, H. (2005b). Compulsive buying – a growing concern? An examination of gender, age, and endorsement of materialistic values as predictors. *British Journal of Psychology*, 96, 467–491.
- Dittmar, H., & Drury, J. (2000). Self–image—is it in the bag? A qualitative comparison between “ordinary” and “excessive” consumers. *Journal of Economic Psychology*, 21(2), 109–142.
- Dittmar, H., Beattie, J., & Friese, S. (1996). Objects decision considerations and self- image in men’s and Women’s impulse purchases. *Acta Psychologica*, 93, 187- 206.
- Donovan D. M. (1988). Assessment of addictive behaviors: Implications of an emerging biopsychosocial model. In D. M. Donovan, & G. A. Marlatt (Eds.), *Assessment of addiction behaviors*. New York: Guilford.
- Edwards, E. A. (1993). Development of a new scale for measuring compulsive buying behavior. *Financial Counseling and Planning*, 4, 67–84.
- Elliott, R. (1994). Addictive consumption: Function and fragmentation in postmodernity. *Journal of Consumer Policy*, 17(2), 159-179.
- Faber, R. J. (1992). Money changes everything: Compulsive buying from a biopsychosocial perspective. *American Behavioral Scientist*, 35(6), 809- 819.
- Faber, R. J., & O’Guinn, T. C. (1988). Expanding the view of consumer socialization: A non-utilitarian mass-mediated perspective. In E. C. Hirschman, & J. N. Sheth (Eds.), *Research in consumer behavior*, Vol. 3 (pp 49-77). Greenwich CT: JAI.
- Faber, R. J., & O’Guinn, T. C. (1992). A clinical screener for compulsive buying. *Journal of Consumer Research*, 19(3), 459-469.
- Faber, R., O’Guinn, T., & Reymond, S. (1987). Compulsive consumption. *Advanced in Consumer Research*, 14(1), 132-5.
- Fah, B. C. Y., Foon, Y. S., & Osman, S. (2011). An exploratory study of the relationships between advertising appeals, spending tendency, perceived social status and materialism on perfume purchasing behavior. *International Journal of Business and Social Science*, 2(10), 202-208.
- Fromm, Erich (1967). The psychological aspects of the guaranteed income. In R. Theobald (Eds.), *The guaranteed income* (pp. 183-193). NY: University of Chicago Press.
- Glatt, M. M., & Cook, C. C. H. (1987). Pathological spending as a form of psychological dependence. *British Journal of Addiction*, 82, 1257-1258.
- Gollwitzer, P. M. (1986). Striving for specific identities: The social reality of self symbolizing. In R. Baumeister (Eds.), *Public self and private self* (pp. 143-159). New York: Springer-Verlag.
- Hair, J. F. Jr., Black, W.C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6<sup>th</sup> Ed.). Upper Saddle River, New Jersey, USA: Prentice – Hall, International Inc.
- Hirschman, E. C. (1992). The consciousness of addiction: Toward a general theory of compulsive consumption. *Journal of Consumer Research*, 19(2), 155-179.
- Jalees, T. (2007). Identifying determinants of compulsive buying behavior. *Market forces*, 3(2), 30-51.
- Kerin, R. A., S. W. Hartley, & W. Rudelius. (2011). *Marketing*, (10<sup>th</sup> Eds.). New York: McGraw-Hill Irwin.



- King, A. (1981). Beyond propensities: towards a theory of addictive consumption. In K. Bernhardt et al. (Eds.), *The changing marketing environment: New theories* (pp. 438-440). Chicago: American Marketing Association.
- Kukar-Kinney, M., Ridgway, N. M., & Monroe, K. B. (2009). The relationship between consumers' tendencies to buy compulsively and their motivations to shop and buy on the internet. *Journal of Retailing*, 85(3), 298–307.
- Lavelle, J. J., Brockner, J., Konovsky, M. A., Price, K., Henley, A., Taneja, A., & Vinekar, V. (2009). Commitment, procedural fairness, and organizational citizenship behavior: A multifoci analysis. *Journal of Organizational Behavior*, 30, 337-357.
- Lejoyeux, M., M. Hourtane, & J. Ades. (1995). Compulsive buying and depression. *Journal of Clinical Psychiatry*, 56(1), 38.
- Levine, D. M., Stephan, D., Krehbiel, T. C. & Berenson, M. L. (2002). *Statistics for managers using Microsoft excel* (3<sup>rd</sup> Eds.). New Jersey: Prentice Hall international, Inc.
- Lyons, B., & Henderson, K. (2000). An old problem in a new marketplace: Compulsive buying on the internet. In ANZMAC 2000 Visionary Marketing for the 21st Century: Facing the Challenge Conference Proceedings (pp. 739-744).
- Manolis, C., & Roberts, J. A. (2008). Compulsive buying: Does it matter how it's measured? *Journal of Economic Psychology*, 29, 555–576.
- Marlatt, G. A., Baer, J. S., Donovan, J. B., & Kivlahan, D. (1988). Addictive behaviors: Etiology and treatment. *Annual Review of Psychology*, 39, 223-252.
- Maruyama, G., Fraser, S. C., & Miller, N. (1982). Personal responsibility and altruism in children. *Journal of Personality and Social Psychology*, 42(4), 658-664.
- McElroy, S. L., Satlin, A., Pope, H. G., & Keck, P. E., (1991). Treatment of compulsive shopping with antidepressants: A report of three cases. *Annals of Clinical Psychiatry*, 3, 199-204.
- McElroy, S. L., Keck, P. E., Jr., Harrison, G., Pope, H. G., Jr., Smith, J. M., & Strakowski, S. M. (1994). Compulsive buying: A report of 20 cases. *Journal of Clinical Psychiatry*, 55(6): 242-248.
- Mitchell, J. E., Redlin, J., Winderlich, S., Crosby, R., Faber, R. J., & Miltenberger, J. S. (2002). The relationship between compulsive buying and eating disorders. *International Journal of Eating Disorders*, 32(1), 107-111.
- Mueller, A., Mitchell, J. E., Mertens, C., Mueller, U., Silbermann, A., & Burgard, M. (2007). Comparison of treatment seeking compulsive buyers in Germany and the United States. *Behaviour Research and Therapy*, 45, 1629–1638.
- Nathan, C. (1988). The addictive personality is the behavior of the addict. *Journal of Consulting and Clinical Psychology*, 56(2), 183-188.
- Neuner, M., Raab, G., & Reisch, L. (2005). Compulsive buying in maturing consumer societies: An empirical re-inquiry. *Journal of Economic Psychology*, 26(4), 509–522.
- Nunnally, J. C. (1978). *Psychometric Theory* (2<sup>nd</sup> Eds.). New York: McGraw-Hill.
- O'Guinn, T. C., & Faber, R. J. (1989). Compulsive buying: A phenomenological exploration. *Journal of Consumer Research*, 16 (September), 147–157.
- Olthof, T., Ferguson, T. J., & Luiten, A. (1998). Personal responsibility antecedents of anger and blame reactions in children. *Child Development*, 60, 1328-1336.
- Park, J. K., & John, D. R. (2011). More than meets the eye: The influence of implicit and explicit self-esteem on materialism. *Journal of Consumer Psychology*, 21, 73–87.



- Petrakis, P. (1985). *Alcoholism: An inherited disease*. Rockville, MD: National Institution on Alcohol Abuse and Alcoholism.
- Richins, M. L. (1987). Media, Materialism, and Human Happiness. In M. Wallendorf, & P. Anderson (Eds.), *Advances in consumer research*, Vol. 14 (pp. 352-356). Provo, UT: Association for Consumer Research.
- Roberts, J. (1998). Compulsive buying among college students: an investigation of its antecedents, consequences, and implications for public policy. *Journal of Consumer Affairs*, 32(2), 295-319.
- Ray, M. (1961). Abstinence cycles and heroin addicts. *Social Problems*, 9, 132-140.
- Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research*, 19(3), 303-16.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Ruyter, D. D. (2002). The virtue of taking responsibility. *Educational Philosophy and Theory*, 34(1), 25-35.
- Scherhorn, G., Reisch, L. A., & Raab, L. A. (1990). Addictive buying in West Germany: An empirical investigation. *Journal of Consumer Policy*, 13, 155-189.
- Schlosser, S., Black, D. W., Repertinger, S., & Freet, D. (1994). Compulsive buying: Demography, phenomenology, and comorbidity in 46 subjects. *General Hospital Psychiatry*, 16, 205-212.
- Schudson, M. (1984), *Advertising, the uneasy persuasion*, New York: Basic.
- Schulz, A. K. D., & Cheng, M. M. (2002). Persistence in capital budgeting reinvestment decisions - personal responsibility antecedent and information asymmetry moderator: A note. *Accounting and Finance*, 42(1), 73-86.
- Scitovszky, T. (1976). *The joyless economy*, New York: Oxford University Press.
- Tabakoff, B., & Rothstein, J. D. (1983). Biology of tolerance and dependence. In B. Tabakoff, P. B. Sutker, & C. L. Randall (Eds.), *Medical and social aspects of alcohol abuse*. New York: Plenum.
- Valence, G., d'Astous, A., & Fortier, L. (1988). Compulsive buying: Concept and measurement. *Journal of Consumer Policy*, 11(4), 419-433.
- Wicklund, R. A., & Gollwitzer, P. M. (1981). Symbolic self-completion, attempted influence, and self-deprecation. *Basic and Applied Social Psychology*, 2(2), 89-114.
- Wicklund, R. A., & Gollwitzer, P. M. (1982). *Symbolic self-completion*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Williamson, D. A. (1990). *Assessment of eating disorders: Obesity, anorexia, and bulimia nervosa*. New York: Pergamon.
- Workman, L., & Paper, D. (2010). Compulsive buying: A theoretical framework. *The Journal of Business Inquiry*, 9(1), 89-126.
- Xu, Y. (2008). The influence of public self-consciousness and materialism on young consumers' compulsive buying. *Young Consumers*, 9(1), 37-48.
- Yurchisin, J., & Johnson, K. K. P. (2004). Compulsive buying behavior and its relationship to perceived social status associated with buying, materialism, self-esteem, and apparel-product involvement. *Family and Consumer Sciences Research Journal*, 32(3), 291-314.

