

## **A Structural Approach on Compulsive Buying Behaviour**

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### **Abstract**

The aim of this paper is to measure the effect of materialism, interpersonal influence and compulsive buying behavior through a conceptual framework based on the Theory of Reasoned Action (TRA). The questionnaire was administered by the appointed enumerators in the selected malls of Karachi. The enumerators visited these malls during different hours and days of the week. The valid sample size for this study is 300 comprising of all age groups. Mall intercept method which is a kind of convenience sampling was used for collecting data. The instrument used for collecting data for this study comprised of four constructs which are (1) Compulsive buying behavior (ten items) (2) materialism (seven items) (3) self esteem (seven items) and (4) influence of others (ten items). Only those constructs were used in the development of the instrument which have established reliabilities and have been used in the context similar to the theme of this paper. After ascertaining the normality of data a typical multiple step procedure was adopted for this study which is inclusive of (1) Exploratory Factor Analysis (2) Reliability Analysis (3) Validity Analyses (4) CFA for all the constructs through Structural Equation

Modeling (SEM), and (5) Testing overall Model through SEM (6) Analyzing the derived hypotheses based on SEM output that is standardized Regression Estimates (SRE), Critical Ratios, and Probability. The conceptual framework based on Structural educational modeling (SEM) was found to be relevant in understanding the impact of predictor variables on compulsive buying behavior. The Chi Square value was significant ( $\chi^2 = 98.403$ ,  $DF = 74$ ,  $p = 0.030 < .05$ ). The CMIN/df (Relative  $\chi^2/df$ ) was  $1.330 < 5$ . The Root Mean Square Error of Approximation (RMSEA) =  $0.033 < 0.08$  and Goodness of Fit Index (GFI) =  $0.957 > 0.90$  meet both the absolute of goodness-of-fit and badness-of-fit criteria. The Comparative Fit Index (CFI) =  $0.966 > 0.900$  and Normed Fixed Index (NFI) =  $0.966 > 0.900$  meet Relative Fit Measures. Whereas Parsimony Adjusted Normed Fit Index (PNFI) =  $0.744 > .0.50$  and Parsimony Comparative Fit Index (PCFI) =  $0.786 > 0.50$  meets Parsimonious Fit measure. In sum, the CFA results indicate that the overall hypothesized model is a good fit. Of the four hypotheses one on the relationship of materialism and compulsive buying was rejected (Standardized Regression Estimates =  $0.303$ ,  $CR = -0.014$ ,  $p = 0.989 > .05$ ) and the rest three were substantiated (failed to reject). The SEM results also shows that the relationship between materialism and influence of others (Standardized Regression Estimates =  $0.359$ ,  $CR = 4.254$ ,  $p = 0.001 < 0.05$ ), was the strongest predictor followed by influence of others viz. compulsive (Standardized Regression Estimates =  $0.321$ ,  $CR = 3.550$ ,  $p = 0.001 < 0.05$ ) and self esteem viz. compulsive (Standardized Regression Estimates =  $0.2920$ ,  $CR = 3.088$ ,  $p = .002 < .05$ ). The three substantiated hypotheses were consistent to earlier studies. Implication for managers and policy makers were drawn from the results. The author of the Theory of Reasoned Action on which the conceptual framework of this study has been developed has confessed that theory might run into problems if extended to other countries and cultures. Perhaps this is the first study based on TRA and in the domain of compulsive buying behavior which has been successfully extended in Pakistan, thus increasing the generalizability of the theory (TRA). After empirically testing the proposed model new measures have been derived from it, which could be used by the policy makers and managers for understanding the significance of compulsive buying behavior.

**Keywords:** Compulsive Buying Behavior, materialism, self esteem and influence of others.

## **INTRODUCTION**

Compulsive buying is a chronic repetitive purchasing behavior (Faber & O'guinn, 1992; Miltenberger et al., 2003) which is harmful to individuals, their family and society (Faber, 2000; Faber & O'guinn, 1992). Compulsive buyers are so obsessed with the acquisition of wealth that they ignore its adverse effect on their health and wellbeing (Belk, 1985; Carver & Baird, 1998; Kasser & Ryan, 1993; Kyrios, Frost, & Steketee, 2004; Richins & Dawson, 1992; M.J. Sirgy, 1998; Wright & Larsen, 1993; Yurchisin, Yan, Watchravesringkan, & Chen, 2006). Increasing trend of excessive buying world over has become a problematic issue (Koran, Faber, Aboujaoude, Large, & Serpe, 2006; Neuner, Raab, & Reisch, 2005; Ridgway, Kukar-Kinney, & Monroe, 2008). Some of the factors associated with compulsive buying behavior are materialism, tendency to fantasize, money attitudes, excitement seeking, obsessive thought, risk taking tendencies, locus of control and self esteem (Desarbo & Edwards, 1996; Dittmar, 2005; Hanley & Wilhelm, 1992; Kwak, Zinkhan, & Roushanzamir, 2004; Li, Jiang, An, Shen, & Jin, 2009; O'Guinn & Faber, 1989; Rindfleisch, Burroughs, & Denton, 1997; Rose, 2007; Sneath, Lacey, & Kennett-Hensel, 2009; Watson, 2009).

This paper has not explored the relationship of all the above discussed factors with compulsive buying but has remained focused on the effect of materialism, self esteem, and influence of others on compulsive buying behavior. The structure of this paper is as follows: Initially, a conceptual framework is developed on the grounding of the Theory of Reason (TRA), followed by discussions on the constructs used in the conceptual framework. Subsequently methodology, results and conclusion are discussed. The paper ends with limitation and scope for future research.

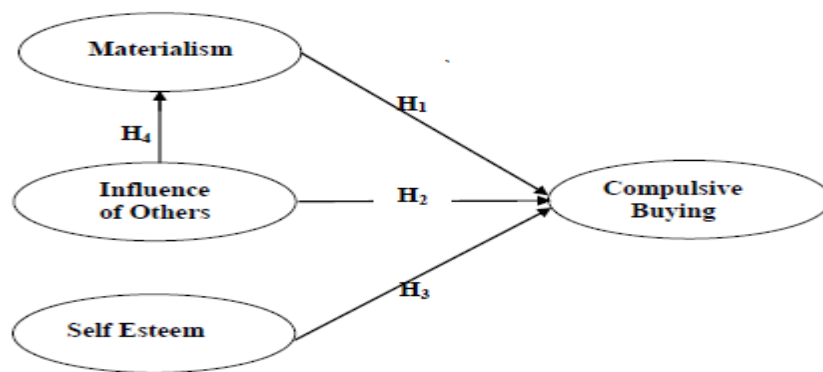
## **1. LITERATURE REVIEW**

### **Underlying Theory and Underpinning of Conceptual Framework**

The conceptual framework of this study is based on the Theory of Reasoned Action (Fishbein & Ajzen, 1975, 2010). The reason for selecting this theory is its flexibility in explaining attitude and behavior in diversified domains including alcoholism, contraceptive, counterfeiting and

shoplifting (Albarracin, Johnson, Fishbein, & Muellerleile, 2001; Jalees & Run, 2013; Park & Lee, 2009; Tonglet, 2002)

The components of TRA are Subjective Norms (SB), Attitude (A), Behavior Intention (BI) and Behavior (B). Actual Behavior of an individual is dependent on his intention to perform a behavior. Behavior Intention (BI) is influenced by Attitude (A) and Subjective Norms (SN) (Aleassa, 2009; Fishbein & Ajzen, 2010). Compulsive buying behavior in this theory (conceptual framework) has been explained through Behavior Intention, whereas self esteem being internal factor has been explained through Attitude. The other variables including materialism, influence of others have been explained through Subjective Norms. The conceptual framework is presented in Figure 1.



**Figure 1(Conceptual Framework)**

The components of the conceptual framework are discussed as follows: Initially compulsive buying behavior is discussed, followed by discussions on the three constructs and their relationship with compulsive buying. Finally, the relationship between influences of other with materialism is discussed. This section ends with a summary of derived hypotheses.

### **Compulsive Buying Behavior**

Faber, O'Quinn and Krych (1987) and Faber (1989) studies on the negative consequences of compulsive buying behavior are the pioneering studies on this issue and hence are widely cited by researchers (Dittmar, Long, & Bond, 2007; Faber & Christenson, 1996; Faber & O'guinn,

1992; LaRose, 2001; LaRose & Eastin, 2002; Scagliotti et al., 2008). Factors such as biochemical, psychological, and sociological stimulate buying behavior. The high content of these factors in compulsive buyers stimulates excessive buying (O'Guinn & Faber, 1989).

Based on the self regulation tendencies, buying behavior is classified as impulsive, compulsive and addictive (Bandura, 1986; LaRose, 2001). The lowest level of self regulation leads to the highest level of consumer vulnerability towards buying which is classified as addiction. It is the most harmful. The highest level of self regulation tendencies means lowest level of consumer's susceptibility towards buying which is impulsiveness. This is the least harmful (LaRose, 2001).

Excessive desire for a particular product or brand leads to a chronic and repetitive purchasing behavior (O'Guinn & Faber, 1989). Increase in its severity leads to dependency type of addiction behavior (Marlatt, Baer, Donovan, & Kivlahan, 1988). Thus the compulsive buyers subconsciously turns to all possible avenues to satisfy their alluring urge of buying (O'Guinn & Faber, 1989).

### **Materialism and Compulsive Buying**

Materialism is not a new phenomenon in consumer behavior studies. It has been the center of attention of marketers and social scientist since last few decades (Belk, 1985; Meškauskaitė, 2013b). Materialism refers to giving the utmost importance to acquisition and display of wealth and least to spiritual aspects (Belk, 1985). Materialistic people tend to improve their self image through excessively and continuous buying irrespective of their need. The three components of materialism are desire, acquisitiveness and possessiveness play a significant role in making the lives of materialistic people miserable (Belk, 1985; M Joseph Sirgy, 2012; Tan, Tambyah, & Kau, 2006).

Materialistic people turn to excessive buying to bridge the disparity or incongruity between 'actual self and desire self. (Dittmar & Drury, 2000; Yurchisin, et al., 2006). Materialistic tendencies also have inverse relationship with satisfaction and self-image (Richins & Dawson, 1992). Materialism stimulates excessive buying for bridging the gap between actual self and

desired self image (Dittmar, 2005; Quoquab, Yasin, & Banu, 2013; Roberts & Jones, 2001; Xu, 2008).

Materialism as a whole and its components individually and in combination affects compulsive buying tendencies. Acquisition of goods is connected to achievement and self recognition, and possession and display of worldly goods helps in improving stature (Kasser & Ryan, 1993; Meškauskaitė, 2013b; Richins & Dawson, 1992). Consequently, materialistic people suffer with psychological disorder (Kasser & Ryan, 1993; Meškauskaitė, 2013b; Richins & Dawson, 1992) Recapitulating on the above, it could be stated that the relationship between materialism and compulsive buying behavior have been validated by numerous researchers on different occasions. Additionally, materialistic people are more vulnerable to compulsive consumption since possession, acquisition and display of wealth is a source of happiness for them (Kasser & Ryan, 1993; Meškauskaitė, 2013b; Richins & Dawson, 1992).

### **Influence of Others and Compulsive Buying Behavior**

The influence of others on compulsive buying is not a new phenomenon, it was initially developed and used in consumer behavior studies in early sixties (Allen, 1965; Ariely & Levav, 2000; Goff & Walters, 1995; McGuire, 1968). Numerous studies have empirically proven the linkage between susceptibility to personal influence and compulsive buying (Ariely & Levav, 2000; Bearden, Netemeyer, & Teel, 1990; Deutsch & Gerard, 1955; Roberts, 1998; Roberts & Jones, 2001). However, this effect is not consistent and varies from one individual to other individual (Meškauskaitė, 2013a; Terry & Hogg, 1996).

The two components of influence of others are normal and informative susceptibility, which individually affects compulsive buying behavior. Normative susceptible consumers are more vulnerable to value expressive and utilitarian influences; therefore they purchase those products that enhance their self image. Additionally, the motivational factor of their purchase is to fulfill the expectations of their target group. These tendencies of compulsive consumers leads to non-satisfaction and excessive buying (Ariely & Levav, 2000; Kropp, Lavack, & Silvera, 2005). Informative susceptible consumers on the other hand are influenced by documentary evidence especially fashion bloggers and web pages which eventually lead to excessive buying (Bearden, et al., 1990; Deutsch & Gerard, 1955).

## **Self Esteem and Compulsive Buying**

Self esteem refers to an individual's reflection of his attitude which he holds towards himself in terms of skills, and abilities (Coopersmith, 1967). Self esteem and self concepts are used interchangeably but they are significantly different. Self concept is more boarder and generic. It is considered as cognitive beliefs one has towards himself in terms of name, occupation, values, beliefs and skills. On the other hand self esteem is more specific and relates to evaluation of self worthiness (Baumeister, 1998).

Compulsive buyers generally have low self esteem which they try to compensate through shopping spree (Faber & O'guinn, 1992; Koran, et al., 2006; Neuner, et al., 2005; Roberts & Jones, 2001). Purchase plays a significant role in enhancing consumer's confidence and self image, which are components of self esteem (Dittmar & Drury, 2000). This phenomenon of uplifting the self esteem through shopping and purchasing has also been validated by others (Banister & Hogg, 2004; Elliott, 1994; Faber, 2000; Faber & O'guinn, 1992; Hanley & Wilhelm, 1992; Schoppe-Sullivan, Schermerhorn, & Cummings, 2007) .

Compulsive buyers generally have a high level of self awareness and low level of self esteem which they try to compensate through purchase of prestige good rather than relying on self competency (Crocker & Wolfe, 2001; d'Astous, 1990; Hanley & Wilhelm, 1992). Compulsive buying and impulsive buying though are significantly different but they have one common aspect which is vulnerability to impulse control (Arslan, 2009; Rookh, 1987; Shafii, 2008).

The literature also suggest that some of the common traits of compulsive buyers are a higher tendency to fantasize, depression and anxiety (Ruvio, Shoham, & Brencic, 2008; Scherhorn, Reisch, & Raab, 1990). Additionally they (compulsive buyers) are highly concerned about their body image (physical attributes and appearance). These traits and body image concern make them vulnerable to unending purchasing tendencies (Krueger, 1998; Shafii, 2008).

Compulsive buyers make deliberate efforts to bridge the gap between actual and desirable appearance through excessive purchase (Elliott, 1994; Krueger, 1998). Thus shopping to them is neither a mean of acquiring necessary or desired products nor a financial transaction but it is a source that fulfill their personal and social motives (Dawson, Bloch, & Ridgway, 1990; Shafii, 2008). Moreover, they (compulsive buyers) feel that returning home without a purchase would

adversity affect their self esteem and people might form an impression that they are incapability of keeping pace with the demands of contemporary society (Shafii, 2008).

### **Influence of others and Materialism**

Interpersonal influence including parents teachers and peers is one of the major causes of materialism (Chaplin & John, 2010). Individuals learns rationality from their parents and materialistic attitude through their peers (Churchill Jr & Moschis, 1979). Family communication has dual effects. It promotes social orientation and confirmatory which leads to materialism (Chaplin & John, 2010; Moore & Moschis, 1981). Parents are the role models for their children and they subconsciously transmit their materialistic values to their children through their behavior and communication (Flouri, 2004). Others also found a positive correlation between materialism and family communication, peer communication (Flouri, 2004; Goldberg, Gorn, Peracchio, & Bamossy, 2003; Moore & Moschis, 1981; Roberts, Manolis, & Tanner Jr, 2008).

While validating the relationship of normative influence and materialism, it was again found that peer pressure group plays a significant role in promoting display of wealth tendencies which is a form of materialism (Shavitt, Torelli, & Wong, 2009; White & Argo, 2009). However, family as well as peer emotional and psychological support will not transmit materialistic values (Chaplin & John, 2010; Kasser, Ryan, Couchman, & Sheldon, 2004).



## Hypotheses

Based on the above discussions the following hypotheses have been generated:

- H<sub>1</sub>: Materialism has a positive relationship with compulsive buying behavior.
- H<sub>2</sub>: Influence of other has a positive relationship with compulsive buying behavior.
- H<sub>3</sub>: Self esteem has inverse relationship with compulsive buying behavior.
- H<sub>4</sub>: Influence of others has a positive relationship with materialism.

## 2. METHODOLOGY

This study tested a conceptual model based on the Theory of Reasoned Action (TRA) depicted in Figure-1. The conceptual framework shows the relationship between materialism and compulsive buying behavior, influence of others and compulsive buying behavior, self esteem and compulsive buying behavior and influence of others and compulsive buying behavior.

### Scale and Measures

The constructs used for this paper have established reliabilities and have been used in the context similar to this study. These scales were of different types and had different point scales, which were converted to seven point Likert Scale. The summary of the constructs are presented in Table 1:

**Table 1 Summary of Scale and Measure**

Measure	Author	No. of Items	Reliability
Materialism	(M.J. Sirgy, 1998)	7	.836 to .973
Self Esteem	(Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995)	10	.82 to .88
Influence of Others	(Bearden, Netemeyer, & Teel, 1989)	10	.90 to .97
Compulsive Buying	(Faber & O'guinn, 1992)	7	0.60 TO 0.85

## Sample and Data Collection

Mall intercept method which is a kind of convenience sampling was used for collecting the data. The questionnaire was administrated by the pre-appointed enumerators in the selected malls of Karachi. The enumerators visited these malls during different hours and days of the week for survey purpose. For small SEM model a minimum of two hundred respondents has been suggested (B. M. Byrne, 2001), therefore the valid sample size of 300 selected for this study fulfill the minimum sample size requirements. Of the total sample size (N=300), 56% were males (N= 168), and 44% were females (N= 132). Respondents' profile is presented in Table No.2.

**Table 2: Responded Profile**

Variable		Number	Percentage
Gender	Male	168	56
	Female	132	44
Age	Up to 18 Years	81	27
	19 to 29 Years	87	29
	30 to 39 Years	57	19
	40 to 49 Years	45	15
	At least 50 Years	30	10
Income	Up to Rs.15k	75	25
	15K to Rs.24K	90	30
	25k to Rs.34K	66	22
	35K to Rs.44K	42	14
	Rs.55K or More	27	9
Marital Status	Single	162	54
	Married	138	46
Education	Primary	81	27
	Matric	72	24
	Inter	54	18
	Bachelors	51	17
	Masters	42	14
	Total	300	100

## **Data Analysis Technique**

SPSS-v19 in this study has been used for statistical techniques such as reliability, descriptive and normality analyses (D. Byrne, London, & Reeves, 1968; Caballero, Lumpkin, & Madden, 1989). For Structural Equation Modeling (SEM) AMOS- v18 has been used. Structural Equation Model (SEM) is a multivariate approach for assessing theories and testing derived hypotheses simultaneously (Hair Jr, Black, Babin, Anderson, & Tatham, 2010).

A multistage procedure recommended for SEM was used in this study (Hair Jr, et al., 2010). This is inclusive of Exploratory Factor Analysis, Outliers Detecting, Normality of Data, Reliability of data, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), Validity of Data, and testing overall SEM model (Hair Jr, et al., 2010; Leech, Barrett, & Morgan, 2005; Steenkamp & Van Trijp, 1991).

SEM analyses was carried out in two stages (Gerbing & Anderson, 1988). Initially CFA for each construct including materialism, influence of others, self esteem, compulsive buying behavior was carried out followed by CFA of the whole model. The following criteria at CFA stage were used for improving the fitness of the mode: (1) Standardized Regression Weight of latent variables  $\geq 0.40$  (Singh, 1995), (2) Second was Standardized Residual Covariance  $< 2.58$  (Joreskog & Sorbom, 1988); and (3) Modification Index  $< 10$  (Joreskog & Sorbom, 1988).

The numbers fit indices are more than 20 with no consensus on which to report for assessing the hypothesized model (Meyers et al., 2006). However, the literature have categorized these indices into three categories (Depicted in Table 3) and have suggested to report at least one from each category (De Run, 2004; Jalees & deRun, 2013; Meyers, Gamst, & Guarino, 2006)

**Table 3 Classification of Fit Measures**

Fit measures					
Absolute		Relative		Parsimonious	
Test	Value	Test	Value	Test	Value
$\chi^2$	P>.05	CFI	>.95	PNFI	>.50
GFI	>.90	NFI	>.90	PCFI	>.50
RMSR	<.05	IF1	>.90		
CMIN/df	<3.00	RFI	>.90		
RMSEA	<.10				

In this paper the following fit indices are reported: (1) Three from Absolute Fit Measures which are Chi Square ( $\chi^2$ ), Relative Chi Square (CMIN/df) and The Root Mean Square Error of Approximation (RMSEA) (2) Two from Relative Fit Measures which are The Comparative Fit Index (CFI), and Normed Fixed Index (NFI), and (3) Another two from Parsimonious Fit Measures which are Parsimony Normed Fit Index (PNFI) and Parsimony Comparative Fit Index (PCFI).

### 3. RESULTS

#### Descriptive and Reliability of Initial Constructs

The normality of the data was tested by converting all the 300 cases to standardized Z-score and all of them were within the prescribed limit of  $\pm 3.5$  (Huang, Lee, & Ho, 2004). Subsequently, reliabilities and other descriptive analyses were carried out which are presented in Table-4.

**Table 4: Descriptive and Reliability of Initial Constructs**

	Reliability	Mean	Std. Dev.	Variance	Skewness	Kurtosis
Self Esteem	0.710	5.737	0.732	0.536	-0.635	0.866
Compulsive Buying	0.832	5.209	0.960	0.922	-0.501	-0.033
Materialism	0.714	5.220	0.850	0.723	-0.461	-0.026
Influence of Others	0.850	5.110	0.932	0.868	-0.415	0.363

Table-4 shows that the reliability of influence of others was the highest ( $\alpha=.850$ ,  $M= 5.110$ ,  $SD= 0.932$ ) followed by compulsive buying ( $\alpha=.832$ ,  $M= 5.209$ ,  $SD= 0.960$ ), materialism ( $\alpha=.714$ ,  $M= 5.220$ ,  $SD= 0.850$ ) and self esteem ( $\alpha=.710$ ,  $M= 5.220$ ,  $SD= 0.732$ ). All these values are within the acceptable range indicating reasonable internal consistency and reliability (Leech, et al., 2005). Skewness and Kurtosis for each construct is within the range of  $\pm 1.5$ , which further reinforces data's normal tendency (B. M. Byrne, 2001; Hair Jr, et al., 2010).

### Exploratory Factor Analysis

Prior to applying Principal factor analysis with Varimax Rotation the data were tested to ascertain whether it meets the requirements such as independent sampling, linear relationships, and moderate correlation. Final results are summarized in Table 5.

**Table 5: Summarized Results of Exploratory Factor Analysis**

Construct	Original items	Kaiser-Meyer Olkin	Barley Test of Sphericity	Cumulative Factor loading	Items Retained
Self Esteem	10	0.798	583.027	55.255%	8
Influence of Other	10	0.840	576.988	50.033%	7
Materialism	7	0.798	366.475	52.728%	7
Compulsive Buying	10	0.847	974.204	53.6430%	7

Table -5 column one shows the number of items at initial stage, and column shows the numbers of items retained after EFA stage.

### Convergent Validity

Since the goodness of fit indexes were meeting the required criteria and factor loadings of all the indicator variables were greater than 0.40 (Refer to Figure 2), therefore the data has convergent validity (Hsieh & Hiang, 2004; Shammout, 2007).

### Discriminant validity

Uniqueness of the variables was tested through Discriminant validity (Hair et al. 2010) by taking the correlations of all the constructs on one to one basis. Correlation of each pair should be less than 0.85 (Kline, 2005; Shammout, 2007). The inter item correlation results suggests that the data fulfill Discriminant validity requirement, which are presented in Table 5.

**Table 6: Inter item Correlation**

Correlations		SE_T	INF_T	CB_T	M_T
Self Esteem (SE_T)	Pearson Correlation	1	.308	.209	.186
	Sig. (2-tailed)		.000	.000	.001
	N	300	300	300	300
Influence of Others (INF_T)	Pearson Correlation	.308	1	.285	.297
	Sig. (2-tailed)	.000		.000	.000
	N	300	300	300	300
Compulsive Buying (CB_T)	Pearson Correlation	.209	.285	1	.236
	Sig. (2-tailed)	.000	.000		.000
	N	300	300	300	300
Materialism (M_T)	Pearson Correlation	.186	.297	.236	1
	Sig. (2-tailed)	.001	.000	.000	
	N	300	300	300	300

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 5 shows that all the relationships were significant at the 0.01 level (2-tailed). The correlation of influence of others (M = 5.110, SD = 0.932, N = 300) and materialism (M = 5.220, SD = 0.855) with,  $r(300) = .308$ ,  $p = 0.0 < 0.01$ , was the strongest and the weakest was of self esteem (M = 5.732, SD = 0.732, N = 300) and Materialism (M = 5.220, SD = 0.855) with,  $r(300) = .186$ ,  $p = 0.0 < 0.01$ .

## Confirmatory Factor Analysis

In CFA the factors and items (indicators) are tested based on theory therefore it is also known as a test for measuring theories (Hair et al, 2006, p. 747). The summarized CFA results of the four constructs are presented in Table 7.

**Table 7: Confirmatory Factor Analysis**

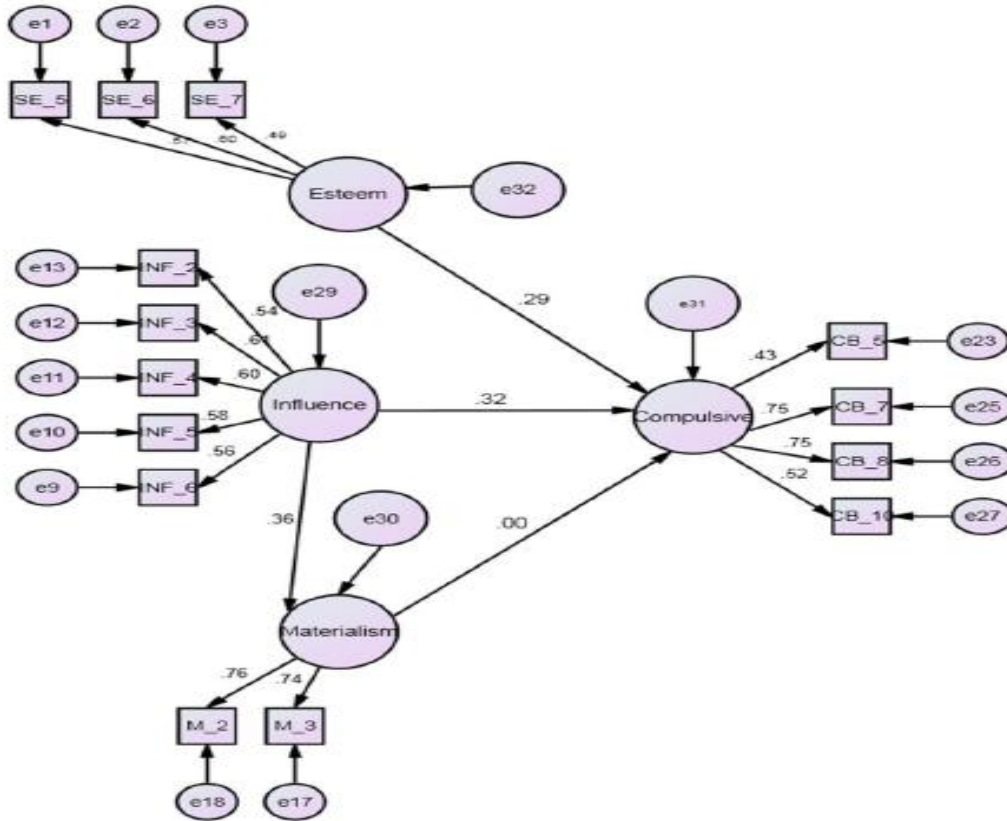
Construct	Chi Square (A)	Deg. of Freedom	Probability	CMIN/df (A)	RIMES (A)	CFI (Bb)	NFI (B)	PNFI (C)
Materialism	0,736	2	0,692	0,3680	0.000	1.000	0.997	0.668
Influence of others	30.134	40	0.068	1.507	0.041	0.977	0.960	0.332
Self Esteem	0.033	2	0.984	0.00	0.00	1.0	1.000	0.333
Compulsive Buying	18.685	9	0.029	2.070	0.790	0.979	0.960	0.576
Criteria	Low	n/a	< 0.05	< 5.0	> 0.10	> 0.95	> 0.50	> 0.50

Source: Meyers *et al.*, (2006) A=absolute, B= Relative, C= Parsimonious

Factor loading for each observed variable is at least 0.40, and standardized residual are below  $\pm 2.58$  hence meeting the minimum requirements (Hair Jr. *et al.*, 2007). All the Fit indices are also within/close to the prescribed limits (See Table 7). In view of the satisfactory results of CFA, the overall model was tested, which is discussed in subsequent section.

## Overall Model

The overall SEM model comprises of three exogenous models including self esteem, influence of others, materialism and one endogenous model compulsive buying behavior. The overall final model is depicted in Figure 2.



**Figure 2: Final SEM Model**

Figure 2 for the overall model shows that each observed variable is exceeding the minimum requirement of factor loading of 0.40. Moreover, standardized residual were below  $\pm 2.58$  (Hair Jr., Anderson, Tatham, & Black, 2007). All the Fit Measures are within the prescribed limits, which are discussed in the following paragraph.

The Chi Square value was significant ( $\chi^2 = 98.403$ ,  $DF = 74$ ,  $p = 0.030 < .05$ ). The CMIN/df (Relative  $\chi^2/df$ ) was  $1.330 < 5$ . The Root Mean Square Error of Approximation (RMSEA) =  $0.033 < 0.08$  and Goodness of Fit Index (GFI) =  $0.957 > 0.90$  meet both the absolute of goodness-of-fit and badness-of-fit criteria. The Comparative Fit Index (CFI) =  $0.966 > 0.900$  and Normed Fixed Index (NFI) =  $0.966 > 0.900$  meet Relative Fit Measures. Whereas Parsimony Adjusted Normed Fit Index (PNFI) =  $0.744 > .0.50$  and Parsimony Comparative Fit Index (PCFI) =  $0.786 > 0.50$  meets Parsimonious Fit measure. Thus the CFA results indicate that the overall hypothesized model is a good fit.



## Hypothesized Results

The SEM model discussed above shows that of the three hypotheses two were accepted, and one was rejected. The summarized results are presented in Table 8

**Table 8 Summary of Hypothesized Relationships**

			SRW*	SE	CR	P
Materialism	<---	Influence	.359	.098	4.254	0.001
Compulsive	<---	Esteem	.292	.147	3.088	0.002
Compulsive	<---	Influence	.321	.104	3.550	0.001
Compulsive	<---	Materialism	-.001	.083	-.014	0.989

\*Standardized Regression Weight

## 4. DISCUSSIONS AND CONCLUSION

This model based on the Theory of Reason Action (TRA) has been successfully extended in the domain of compulsive buying behavior, perhaps for the first time in Pakistan. The apprehension of the author of TRA that this theory will run into problems if extended to other culture and countries have been removed (Jalees & Run, 2013)

The incidences of compulsive buying has increased quite significantly in last few years all over the world due to which concerned of researcher on this issue has also increased significantly (Koran, et al., 2006; Neuner, et al., 2005; Ridgway, et al., 2008). Thus this model tested empirically through SEM will help in understanding the compulsive buying behavior of Pakistan and other nations with similar culture. Of the four hypotheses three were substantiated (Refer to Table 8) and one was rejected, which are discussed in the following paragraphs.

The hypothesis one on the effect of materialism (M= 5.220, SD= 0.850) on compulsive buying behavior (M= 5.209, SD= 0.960) was rejected (SRW= - 0.001. CR= 0.014, P= 0.989 < 0.01). This result is inconsistent to earlier studies that found materialism and compulsive buying behavior have strong and significant relationship (Belk, 1985; M Joseph Sirgy, 2012; Tan, et al., 2006). It has also been reported in earlier studies that materialistic people are more concerned about their self image therefore they buy excessively whether they are in the need of the products

or not (Belk, 1985; M Joseph Sirgy, 2012; Tan, et al., 2006). Others also found that materialism is a strong predictor of compulsive buying, and they also contended that compulsive buyers resort to excessive buying to bridge the gap between actual-self and desired self- image (Dittmar, 2005; Quoquab, et al., 2013; Roberts & Jones, 2001; Xu, 2008).

Hypothesis two results shows that influence of others (M= 5.110, SD= 0.932) has a positive and significant effect (SRW= 0.321 CR= 3.550, P= 0.001 > 0.01) on compulsive buying behavior (M= 5.209, SD= 0.960), which is consistent to earlier literature (Ariely & Levav, 2000; Kropp, et al., 2005). The literature also suggests that normative susceptibility and informative susceptibility, which are components of influence of others, as a whole and individually leads towards excessive buying (Ariely & Levav, 2000; Kropp, et al., 2005)

Hypothesis three on the inverse effect of self esteem (M= 5.732, SD = 0.732, N = 300) on compulsive buying behavior (M= 5.220, SD= 0.850, N=300) was rejected (SRW=0.292. CR=3.088, P=, 002< 0.01). Contrary to this findings the literature suggests that compulsive buyers generally have low self esteem which they try to compensate through shopping spree (Faber & O'guinn, 1992; Koran, et al., 2006; Neuner, et al., 2005; Roberts & Jones, 2001). Additionally, studies shows that compulsive consumer perception is that purchase helps in enhancing their confidence and self image, which are components of self esteem (Dittmar & Drury, 2000). This phenomenon of uplifting the self esteem through shopping and purchasing has also been validated by others (Banister & Hogg, 2004; Elliott, 1994; Faber, 2000; Faber & O'guinn, 1992; Hanley & Wilhelm, 1992; Schoppe-Sullivan, et al., 2007). It may be pointed out that compulsive and impulsive buyers behaviors are significantly different except one common aspect which is vulnerability to impulse control while shopping (Arslan, 2009; Rookh, 1987; Shafii, 2008).

Hypothesis four on the relationship between influence of others (M= 5.110, SD= 0.932) and materialism (M= 5.220, SD= 0.850) was revalidated (SRW=0.359. CR=4.254, P=, 001< 0.01) which is consistent to some and inconsistent to others studies. For example in some studies it has been found that interpersonal influence has direct effect on materialism (Chaplin & John, 2010; Roberts, et al., 2008), while in other studies it has been found that influence of others have an effect on self esteem but no effect on materialism (Chaplin & John, 2010; Kasser, et al., 2004).

## Limitation and Future Research

This study was limited to one city Karachi only. Future studies could be extended to other studies of Pakistan as well, especially considering that she (Pakistan) has a rich and ethnically diversified culture. Additionally affect of culture and impulsive buying behavior could also be incorporated in the conceptual framework of future studies

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