

Analyzing the effect of demographic characteristics on compulsive buying: A case study of consumers in Iranian shopping centers

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Abstract: Shopping is a normal and routine part of everyday life for most people, but compulsive buyers have different shopping experience. The inability to control an overpowering impulse to buy pervades their lives and results in significant and sometimes severe consequences. This study aims to investigate the compulsive buying behavior and explore its relationship with some demographic variables. A comprehensive data set has been collected through a survey of 1144 customers who had the experience of buying at various shopping centers in Tehran, Iran. According to the result of a validated questionnaire, a compulsive buying latent variable has been calculated for each customer using the Structural Equation Modeling. Afterward, the relationship between underlying demographic characteristics and the compulsive buying variable has been analyzed using a number of statistical tests. The results demonstrate that some of these antecedents significantly affect compulsive buying tendency. The findings would assist managers, marketers, policy makers, and health care practitioners in their decisions, because individuals who exhibit negative consumption behaviors variously affect these parties.

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1. Introduction

One of the fundamental objectives of the marketing discipline is to theoretically and empirically analyze and predict the consumer behavior in market place. The consumer behaviors, like other human activities, are not totally the result of rational decision and may be influenced by short-term emotional factors. Such consumer behaviors have been addressed as non-rational (Rook, 1987), abnormal (O'Guinn & Faber, 1989), and even deviant (Donovan, 1988; Hirschman, 1992) behavior. Compulsive consumption is one of the non-rational consumer behaviors in which individuals use a product repetitively or excessively to ease a tension, anxiety or distress aroused by an obsession. Compulsive buying, as a type of compulsive consumption termed in the clinical literature, is a non-rational behavior and has gained remarkable attention among researchers in marketing since 1980. (cf. Black, 2004; Dittmar, 2004; Faber, 2004). Compulsive buying is a label which has been used recently in both psychiatric and consumer research contexts to refer to the inability to shop or buy "normally" (Faber, O'Guinn, & Krych, 1987; O'Guinn & Faber, 1989).

Nowadays, an increasing number of people engage in uncontrolled, excessive buying of consumer goods that can lead to psychological distress and serious effects on individuals' lives, such as substantial debt (e.g. Benson, 2000; Dittmar, 2004). Hence, analyzing the factors influencing the

compulsive buying is essential to assist individuals avoid the destructive financial and psychological consequences and support decision makers effectively and efficiently establish the marketing strategies. Compulsive buying, like other obsessive and addictive behaviors, may be affected by biochemical, psychological and/or demographical factors (Donovan, 1988; Faber, 1992). This study focuses on demographical factors and aims to examine the relationship between demographic variables and compulsive buying tendency. Firstly, the compulsive buying tendency is measured by a verified scale, referred as Edwards compulsive buying scale (Edwards, 1993), using questionnaire collected from 1144 consumers. Gender, Age, Marital Status and Income were therefore examined as factors that may systematically influence the tendency of buying behavior using statistical tests.

The affluence and welfare has had increasing trend in developing countries like Iran and gigantic shopping centers have become more and more into existence and available in recent decades. Therefore, the people purchasing power has boosted and shopping has become more convenient, and consequently the consumerism and relevant dysfunctions of consumer behaviors has augmented. On the other hand, rising social problems such as budget and career problems, heavy traffic, air and noise pollution and lack of emotion and leisure time in capital cities brings about the psychological illnesses such as depression, anxiety and stress that

may cause the non-rational consumer behaviors. Hence, studying these consumer behavior dysfunctions such as compulsive buying and the factors inspiring them would be significantly valuable to policy makers who are responsible for the society wellbeing. The outcomes of this study would assist decision makers to uncover the demographic factors, which remarkably affect compulsive buying, and launch strategies to prevent this abnormal behavior occurrence.

The rest of paper is organized as follow: Section 2 describes the literature of compulsive buying and the demographic factors. The methodology of this study is explained in Section 3. The empirical results are demonstrated in Section 4. Finally Section 5 concludes the findings and proposes the future studies.

2. Literature Review

In this section the existing studies about compulsive buying and current definitions are briefly presented. Then, the researches that investigated the influence of each demographic variable, namely Gender, Age, Marital Status and Income, on compulsive buying are introduced in four sequential sub-sections.

2.1 Compulsive Buying

Compulsive Buying (CB) is characterized by a preoccupation with buying and shopping, by frequent loss of control over buying, and by excessive purchasing of items that are not needed and not used. Compulsive buyers buy not so much to obtain utility or service from a purchased commodity as to achieve gratification purchased commodity as to achieve gratification through the buying process itself. CB negatively impacts personal relationships, is time consuming, causes marked distress and financial problems and interferes with social and/or occupational functioning (McElroy, Keck, Pope, Smith, & Strakowski, 1994). O'Guinn and Faber (1989) view compulsive buying as an addictive behavior with the following definition: a response to an uncontrollable drive or desire to obtain, use or experience a feeling, substance, or activity that leads an Individual to repetitively engage in a behavior that will ultimately cause harm to the individual and/or others. This definition is similar to that suggested by Valence et al. (1988), who identified three constructs associated with compulsive buying behavior: 1) a strong emotional activation (increase in psychological tension); 2) a high cognitive control (an acknowledgement that buying will reduce the tension); and 3) a high reactivity (looking for tension reduction, rather than owner ship). It also should be noted that the O'Guinn and Faber (1989) definition is sufficiently general to allow for non-purchase consumption (e.g., anorexia/bulimia, or gambling).

D'Astous (1990) argued that all consumers can be fitted along an "urge to buy" continuum and that those in the upper extreme of this continuum can be referred to as compulsive buyers. O'Guinn and Faber (1989) insist that any definition of compulsive buying must include two criteria: (1) the behavior must be repetitive, and (2) the behavior must be problematic for the individual. Using these two criteria, O'Guinn and Faber (1989) defined compulsive buying as "chronic, repetitive purchasing that becomes a primary response to negative events or feeling. The activity, while perhaps providing short-term rewards, becomes very difficult to stop and ultimately results in harmful consequences".

2.2 Compulsive buying and Gender

In recent consumer research, there is an ongoing debate about the relationship between compulsive buying and gender. In research that examines continuous scores on Compulsive buying scales, women typically score significantly higher than men (e.g. Scherhorn, Reisch & Raab, 1990). With regard to population-based studies, some authors (Neuner, Raab, & Reisch, 2005) indicated that women are more prone to CB than men whereas others did not (Koran, Faber, Abou jaoude, Large, & Serpe, 2006; Mueller et al., 2010). Shopping is described as a gendered activity, part of "women's work" in their roles as housewives (Campbell, 2000; Elliott, 1994; Lunt & Livingstone, 1992). Women's propensity for shopping is related to their "dependent" role, both in relationships and in society (Scherhorn et al., 1990). Women do most of the shopping because it is one of their main "leisure activities" (Campbell, 2000, p. 60; Elliott, 1994) and because shopping provides them with an "opportunity to socialize" (d'Astous, 1990; Lunt & Livingstone, 1992). Women are taught that shopping is "pleasurable" (Faber et al., 1987); they use shopping as a form of "self-expression" (Elliott, 1994) and to "enhance their self-image" (Dittmar, 2000; Dittmar, Beattie, & Friese, 1995; Krueger, 1988) because society places importance on their outward appearance. Krueger (1988) suggests that "women who shop compulsively are driven to attempt to restore a depleted self" (the "empty self" noted by Elliott, 1994; Cushman, 1990; and Scherhorn et al., 1990), that is, they seek validation of self-worth through consumption. Despite general agreement that compulsive buying is a gender-related disorder (Campbell, 2000; d'Astous, 1990; d'Astous, Maltais, & Roberge, 1990; Dittmar, 2000; Dittmar & Drury, 2000; Elliott, 1994; Faber & O'Guinn, 1992; Faber, Christenson, de Zwaan, & Mitchell, 1995; Scherhorn et al., 1990), some researchers are not entirely convinced of this gender specificity (Elliott, 1994). Dittmar and Drury (2000) believe that, as roles for

men and women change and an ideal male appearance is increasingly emphasized, excessive buying will be found more frequently among male consumers.

2.3. Compulsive buying and Age

The majority of studies that compare compulsive buyers with ordinary buyers report that the average age of compulsive buyers is lower by between 8–11 years in France (Lejoyeux et al., 1997), Germany (Scherhorn et al., 1990), and the US (Hanley & Wilhelm, 1992; O'Guinn & Faber, 1989), although some studies found small (Lejoyeux, Haberman, Solomon, & Ades, 1999) or no age differences (Black et al., 1998; DeSarbo & Edwards, 1996). Reports from compulsive buyer samples give average ages between 30 and 31 years (Black, Monahan, Schlosser, & Repertinger, 2001; Schlosser et al., 1994). European Union project identified 46% of Scottish 16- to 8-year-olds as showing possible early tendencies towards uncontrolled buying, because they reported being unable to resist advertising stimuli and had a lack of control over their spending habits (Garces Prieto, 2002). There are some indications that younger persons may be more susceptible than older ones to compulsive buying tendencies (e.g., Dittmar, 2005), although several studies found no effect of age on problematic buying (e.g., Black, Repertinger, Ganey, & Gabel, 1998). Taking these findings and arguments together, it is therefore hypothesized that younger respondents are more prone to compulsive buying than older respondents, which makes it important to sample across a wide age range, including adolescents.

2.4. Compulsive buying and Marital Status

Previous research on compulsive buying has suggested that it too may be related to mood state. In sentence-completion tasks, compulsive buyers indicated that they were most likely to buy something when they were in negative mood states (Faber et al. 1987). Recent work on compulsive buying has suggested that these behaviors may be partially motivated by a desire to change or manage moods. These purchases are most common when people are experiencing negative moods such as divorce, low exam grade, personal rejection. Divorce is a common and highly stressful event. Marketing researchers know relatively little about the long term or short term effects of divorce on consumer behavior and attitudes. McAleander, Schouten and Roberts (1993) suggest that divorce leads to acts of consumption, which, in turn, are attempts to cope with the stress associated with a divorce.

2.5. Compulsive Buying and Income

Despite the ongoing debate about the relationship between compulsive buying and gender, the literature is clearer about the relationship between

compulsive buying and class. No one class seems to be immune to compulsive buying. In those studies in which class is mentioned specifically, subjects are drawn either exclusively from the lower middle to upper middle classes (Rook, 1987), predominantly from the middle to upper middle classes (Lunt & Livingstone, 1992), or from the same unidentified class (O'Guinn & Faber, 1989). In another, the occupations of subjects ranged from unskilled to managerial (Dittmar & Drury, 2000). D'Astous (1990), the only researcher to address the relationship between compulsive buying and class in some detail, found a "U-inverted relationship between income and compulsive buying tendencies," which suggests that the middle class, not the lower or upper classes, is most likely to suffer from such tendencies. D'Astous (1990) also claims that his findings seem to converge with those of O'Guinn and Faber (1989).

3. Methodology

Questionnaire based scales are ideally suited to measuring the relative strength of compulsive buying tendencies in individuals. Edvard (1992) developed a scale to measure the low to high levels compulsiveness in consumers' behavior. According to the Edvards (1992) scale, the range of compulsive buying is not dichotomous behavior, but one that lies along a continuum with ranges that could be designated as non-compulsive, recreational, borderline compulsive, compulsive, and addicted buying respectively. Such a continuum is illustrated in Figure 1.

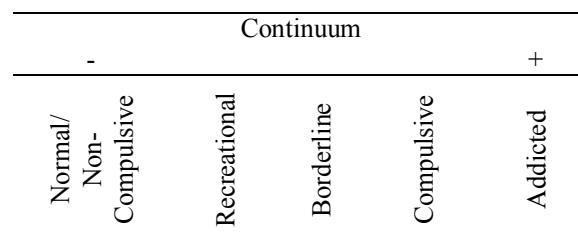


Figure1: The compulsive buying continuum

The scale is comprised of 13 psychological items that best measure the level of respondents' compulsive buying behavior. The questionnaire used in this study applied this 13-item scale to measure the degree of compulsiveness and therefore it asked respondents the following questions:

- 1) I feel driven to shop and spend, even when I don't have the time or the money.
- 2) I get little or no pleasure from shopping.
- 3) I hate to go shopping.
- 4) I go on buying binges.
- 5) I feel "high" when I go on a buying spree.
- 6) I buy things even when I don't need anything.

- 7) I go on a buying binge when I'm upset, disappointed, depressed, or angry.
- 8) I worry about my spending habits but still go out and shop and spend money.
- 9) I feel anxious after I go on a buying binge.
- 10) I buy things even though I cannot afford them
- 11) I feel guilty or ashamed after I go on a buying binge.
- 12) I buy things I don't need or won't use.
- 13) I sometimes feel compelled to go shopping.

The above-mentioned items were measured by the revised CBS scale which used 7-point Likert-type scales, ranging from 1 strongly disagree to 7 strongly agree. Higher scores indicate stronger compulsive buying tendency and vice versa. The sample is composed of consumers who went shopping in several shopping centers in capital city Tehran. Due to disperse geographical distribution of consumers, this study applied the two-stage cluster sampling. Each shopping center was considered as one cluster and a number of clusters (shopping centers) were randomly selected at the first stage. At the second stage, a sufficient number of respondents then randomly selected from the clusters that we choose at the first stage. According to the (Cochran, W. G. (1977) the minimum sample size n can be computed as follow:

$$n = (Z^2 p(1-p))/d^2 \quad (1)$$

This formula provides us with the minimum sample size needed to detect significant differences when Z is determined by the acceptable likelihood of error (the abscissa of the normal curve). The value of Z is generally set to 1.96, representing a level (likelihood) of error of 5%. We want the highest accuracy possible, with the smallest sample size. This level of error, 5%, gives us the best trade-off between these two goals p is the conversion rate we expect to see (estimate of the true conversion rate in the population), and d is the minimum absolute size difference we wish to detect (margin of error, half of the confidence interval). Hence, 1200 respondents were asked to fill the questionnaire during a one-month period. 56 out of 1200 responses are deleted due to either obvious inconsistent response patterns or a large number of missing data within questionnaire. Finally, a sample of 1144 customers who had the experience of buying at various shopping centers in Tehran-Iran was collected. Table 1 presents the demographic profile of the respondents including their Gender, Age, Marital Status and Income Levels and the compulsive buying tendencies for each group.

4. Results

This section presents the statistical tests results, t-test and ANOVA analysis, which were used to examine the impact of demographic variables on

compulsive buying. The following four hypotheses are defined to examine the effect of Gender, Age, Marital Status and Income respectively on compulsive buying.

H1a: There is a significant relationship between compulsive buying tendency and gender.

H1b: There is a significant relationship between compulsive buying tendency and age.

H1c: There is a significant relationship between compulsive buying tendency and marital status.

H1d: There is a significant relationship between compulsive buying tendency and income level.

According to the results of Table 2, $t = -0.693$, so a significant difference between the two groups in terms of gender and compulsive buying not be seen. ANOVA results indicate that the null hypothesis is rejected based on the equality of the groups mean. According Table 3, $F=16.929$ is significant and average compulsive buying is different in age groups and the highest compulsive buying have been seen in the age group 21 to 26. According Table 4, $F=6.325$ is significant and average compulsive buying is different in marital status groups and the highest compulsive buying have been seen in the group of divorced. In Table 5, ANOVA results indicate that the null hypothesis is rejected based on the equality of the groups mean. $F=5.228$ is significant and average compulsive buying is different in income groups and the highest compulsive buying have been seen in the 1000000-1500000 income group.

5. Conclusion

For most people, buying is a normal and routine part of everyday life. For compulsive buyers, the inability to control an overpowering impulse to buy pervades their lives and results in significant and sometimes severe consequences. The present research aims to improve understanding of compulsive buying through examining gender, age, and marital status. The results not confirmed previously documented gender differences, and showed that younger people are more prone to compulsive buying. Also average compulsive buying is different in groups based on marital status and divorce influence on compulsive buying. The consumption implications have not received adequate attention. Added to the earlier work in this area of research, the present study enhances our current understanding of how marital status and age can influences the consumption of people. This is particularly true, given that many Iranians will experience divorce or parental separation in their lifetime. There is an increased risk of compulsive buying. Since consumption compulsivity can be seen as a negative social and cultural phenomenon, social

policy maker should consider this negative impact and design policies to reduce it.

There are ample opportunities and need for future research in the area of compulsive buying. Future research is needed to investigate the impact of other demographic variable such as social class, family structure on compulsive buying.

Table 1: The demographic profile for respondents

	Number of samples	Percentage	Mean	Std. Deviation	Std. Error Mean
Gender					
Female	758	66%	3.23	0.73	0.02
Male	386	34%	3.26	0.76	0.03
Age					
15-20	102	9%	3.17	0.67	.070
21-26	637	56%	3.32	0.74	.03
27-32	232	20%	3.25	0.71	.04
33-38	99	9%	3.21	0.60	.06
39-44	43	4%	2.68	0.51	.08
45-50	31	2%	2.24	0.78	.14
Marital Status					
Single	830	73%	3.25	0.72	0.02
Married	280	25%	3.18	0.81	0.04
Divorced	16	1%	3.96	0.49	0.14
Other	18	1%	2.75	0.47	0.13
Income Level					
<400 RL	358	31%	3.09	0.76	0.05
400-1000 RL	482	42%	3.25	0.85	0.04
1000-1500 RL	192	17%	3.48	0.59	0.06
1500-2000 RL	36	3%	3.40	0.84	0.21
2000> RL	76	7%	2.97	0.59	0.09

Table 2: Levene-test results for gender effect

		Levene's Test for Equality of Variances	
		F	Sig.
Compulsive buying tendency	Equal variances assumed	0.18	0.67
	Equal variances not assumed	Null	Null

Table 3: t-test results for gender effect

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
Compulsive buying tendency	Equal variances assumed	-0.69	1113	0.488
	Equal variances not assumed	-0.68	718	0.494

Table 3: ANOVA results for age effect

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	43.36	5	8.67	16.92	.0
Within Groups	546.17	1066	0.51		
Total	589.53	1071			

Table 4: ANOVA results for marital status effect

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.367	3	3.45	6.32	.0
Within Groups	606.97	1111	.54		
Total	617.33	1114			

Table 5: ANOVA results for Income Level effect

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.906	4	3.227	5.228	.000
Within Groups	415.366	673	.617		
Total	428.272	677			

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