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Over the past decade, online shopping appears to have been a common activity in this technological world where consumers have the ability to engage in all stages of decision making related to products and/or services. However, researchers have contended that the Internet may present a paradoxical situation in today's socio-technological environment for online consumers who have engaged in different online activities. On the one hand, the Internet may help one to improve relationships with inter-groups, create social recognition of an individual, and enhance quality of life. On the other hand, the Internet may also cause one to experience unregulated online consumption behavior, which may create harmful consequences. Virtual communities or online groups are a group of people who share common interests and practices, and these people tend to communicate with each other on a regular basis over the Internet via a common location (e.g., social networking websites). The interaction among virtual communities' members may cause some form of addictive behaviors among the users. Given the scarcity of empirical work related to this phenomenon, the current study attempts to develop and empirically test the conceptual model of E-compulsive buying tendencies within the context of understanding its antecedents (i.e., characteristics of virtual community participants) and consequences (i.e., one's well-being and internet addiction). In addition, the study investigates the moderating effects of psychological

factors on the relationships between characteristics of virtual community participants and E-compulsive buying tendencies.

Data were collected from a convenience sample of college students attending the University of North Carolina at Greensboro during the spring 2011 semester. The final sample was comprised of 192 college students. Of these, 175 were female and 115 were Caucasian. Approximately 90% were in the traditional student age category of 17 to 25 years old. A series of multiple regressions and simple regressions were performed to test all hypotheses. Results revealed that three characteristics of virtual communities' participants (i.e., normative conformity, online participation level, and perceived internet expertise) are the major drivers of E-compulsive buying tendencies, which in turn positively affected internet addiction. Results further revealed that the interaction between self-regulation and informative conformity is likely to reduce the tendency to be an E-compulsive buyer. Also, the interaction between emotional and mood enhancement and online participation level is likely to enhance the possibility of the participant to be an E-compulsive buyer. Implications for academics and virtual community policy makers are offered. Limitations and future research directions are identified.

AN EMPIRICAL EXAMINATION OF ANTECEDENTS AND CONSEQUENCES OF
E-COMPULSIVE BUYING TENDENCIES: THE MODERATING ROLES OF
PSYCHOLOGICAL FACTORS

by

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APPROVAL PAGE

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CHAPTER I

INTRODUCTION

Background

Cyber Retail Environment and Virtual Communities

Consumers in today's technological world are enjoying access to shopping via computer-mediated environments more than ever before (Koufaris, Kambil, & Barbera, 2001; Lee & Park, 2008; Lokken et al., 2003). Many consumers are turning to online stores for their merchandise and services. This alternative means of shopping is increasing in popularity, attracting more shoppers for such reasons as speed, convenience, ease of use, and less time spent on shopping (Jayawardhena & Wright, 2009; Lokken et al., 2003). The growing popularity of online shopping is reflected in Browne, Durrett, and Wetherbe's (2004) study, which reported that almost 25% of respondents preferred Internet shopping over conventional ways of buying products. The United States has the largest online retail sector, accounting for 40% of global sales. Specifically, it is reported that in 2009, the U.S. market alone possessed the highest online revenue of \$134.9 billion, as compared to European and Asian Pacific markets with a total revenue of \$131.9 and \$57.3 billion respectively (Datamonitor, 2010). Online shopping appears to be a common activity in this technological world where consumers have the ability to

engage in all stages of decision-making processes related to products and/or services, ranging from searching for products and comparing prices through different websites to making online purchases, similar to those steps consumers may go through in regular stores (Kozinets, 2002; Poloian, 2003).

However, several researchers have argued that the Internet may present a paradoxical situation in today's socio-technological environment for online consumers who have engaged in different online activities (Amichia-Hamburger & Furnham, 2007; Ko & Kuo, 2009; Lee & Park, 2008; Wang & Yang, 2007). On the one hand, the Internet may help one to improve relationships with inter-groups, create social recognition of an individual, fulfill his/her personal needs, and enhance quality of life (Amichai-Hamburger & Furnham, 2007). For some online consumers, on the other hand, the Internet may also cause unregulated online consumption behavior such as addiction and excessive online shopping dependency (Lee & Park, 2008; Wang & Yang, 2007). This paradoxical situation may have occurred as a result of marketing efforts that many firms started to attempt to establish relationships with consumers through a creation of virtual communities (Farquhar & Rowley, 2006; Lee & Park, 2008; Wang & Yang, 2007).

Virtual communities or online groups are mediums for online users and product sellers to communicate "many to many" in a single platform where users share or gather to exchange common interests or experiences (Lin, 2009). Ridings, Gefen, and Arinze (2002) define a virtual community as a group of people who share common interests and practices, and who tend to communicate to each other on a regular basis over the Internet via a common location or mechanism (e.g., social networking websites). Generally,

virtual communities serve as discussion forums where people share common interests and communicate with one another via electronic media. This type of communication occurs irrespective of geographical location, physical interaction, or ethnic origin (Lee & Park, 2008). As a result, virtual communities help both consumers and retailers to discuss and communicate about information regarding various products of interests (Valck, Bruggen, & Wierenga, 2009). Such virtual communities have been created in social networking websites, which have gone through technological and cultural transformations, resulting in new forms of community and identity. Social networking was described as a virtual space where “users can join networks organized by city, workplace, school, and region to connect and interact with other people. People can also add friends and send them messages, and update their personal profile to notify friends about themselves” (Casteleyn, Mottart, and Rutten, 2009, p. 439).

Conventional networking platforms such as blogs, forums, and newsgroups have moved into a new form of networking through social networking websites (Tikkanen, Hietanen, Henttonen, & Rokka, 2009). The increasing popularity of social networking websites like Facebook and Twitter have attracted attention of marketers to show more interest towards the marketing implications associated with the social networking platforms (Casteleyn et al., 2009; Firat & Dholakia, 2006). Scholars have reported that there are a number of influencing factors such as socialization, entertainment, self status seeking, and information available that have been found to encourage users to participate in online groups of many social networking websites (Park, Kee, & Valenzuela, 2009; Valck et al., 2009).

Hoffman and Novak (1996) noted that virtual communities facilitate interaction among consumers to share their views and experiences about products directly. Shared information, in turn, will be reviewed by other consumers. According to Kozinets (2002), there are five different types of virtual communities: electronic bulletin boards, independent web pages, email lists, multiuser dungeons, and chat rooms. Product groups and fan groups in a social networking website and other product forum websites fall into the category of electronic bulletin boards, multiuser dungeons, or chat rooms. Recently, with the current Internet trend, virtual communities have become a major source of information for many consumers that aid in facilitating their decision-making process in buying (Faber, Lee, & Nan, 2004; Lin, 2009). Because virtual communities help the users to gather information, exchange common interests, clarify doubts, and share experiences, these groups work well for users who seek information related to any products or services they intend to purchase (Lin, 2009). Virtual communities can exhibit basic characteristics that may enhance online customer engagement; nonetheless, there are some serious and inspiring followers in these kinds of virtual communities who stay updated and update others in the communities on a daily basis. These virtual community members' behaviors may cause some form of addictive behavior among the users (Lin, 2009; Novak, Hoffman, & Yui-Fai, 2000; Wang & Fesenmaier, 2004). Especially, online shoppers who are compulsive may be likely to rely on these virtual communities to find more information and product reviews to satisfy their urge to buy (Kim, Park, & Jin, 2008; Lee & Park, 2008; Valck et al., 2009). This body of research has indicated that virtual

communities have the potential to generate an impact on consumers' compulsive buying tendencies in the online environment.

Compulsive Behavior in the Online Environment

Shopping is a common activity for normal people in their daily lives, but it turns out to be a unique one for compulsive buyers. More than the matter of degree of occurrence is the matter of motivation involved in the shopping behavior in a compulsive way for the shoppers (O'Guinn & Faber, 1989). Compulsive behavior is also described in a different form where such behavior may serve as a self-medication to depression and other negative effects for shoppers (Faber & Christenson, 1996). Compulsive buyers shop unplanned and spontaneously, due to their impulsive urge to buy for that moment. Most compulsive buyers end up doing this to elevate their mood from depression to a state of happiness or joy (Shoham & Brencic, 2003). Compulsive buyers' motivation is one of the major factors to be considered, because they may simply have a greater desire for products and low levels of will power (O'Guinn & Faber, 1989). Understanding the negative consequences of compulsive buying behavior may aid one to improve the subjective well-being of the consumers (Shoham & Brencic, 2003). Research regarding compulsive buying behavior has gone to the next level from the regular retail store environment to the computer-mediated environment (Dittmar, Long, & Bond, 2007). As Lyons and Henderson (2000) state, online compulsive buying (hereafter E-compulsive buying) is an "old problem in a new marketplace" (p. 739). Most online shopping is hedonic-driven motivation, associated with a sense of enjoyment (Koufaris et al., 2001)

and excitement (Jayawardhena, 2004). Hence, convenience and involvement are considered as major factors that make the online shopping gains its importance among the shoppers (Jayawardhena & Wright, 2009).

As described before, compulsive buying behavior happens among consumers due to repetitive, uncontrolled shopping that helps consumers to elevate their mood and fulfill their emotional needs (American Psychiatric Association, 1985, p. 234; Shoham & Brenic, 2003, p. 128). Compulsive buyers are usually characterized by three core features of compulsive buying: experiencing shopping urges as irresistible, losing control over buying behavior, and continuing with excessive buying despite harmful consequences (Dittmar, 2004). Based on core features of compulsive buying behavior, it is believed that deficiency in self-regulation may act as a link to this uncontrolled buying behavior. Also, online shoppers use the online shopping environment as a potential way to evade the general controlled shopping standards and carry on with their uncontrolled buying behavior (Lee, Lennon, & Rudd, 2000; Lejoyeux, Haberman, Solomon, & Ades, 1999). Furthermore, abundant research has also identified personal-related influencing factors such as emotional buying motives and deficient self-regulation of compulsive buying tendencies among consumers (Benson, 2006; Dittmar et al., 2007; LaRose & Eastin, 2002). Therefore, it is imperative to consider the influence of emotional buying motives and self-regulation on online consumers' compulsive buying behaviors.

Compulsive Buying Behavior and its Consequences

Online users come with different goals to the online environment where they search for information for various products and/or services so as to fulfill their hedonic or different kind of needs in their daily lives (Chen, Tarn, & Han, 2004). Sometimes these online users deeply engage in a number of online activities, from browsing, to searching, to chatting, and also to making purchase decisions that require them to spend countless hours in cyberspace. Consequently, these online activities may affect their well-being as well as result in a possible Internet addiction (Chen et al., 2004; Ko & Kuo, 2009).

Subjective well-being (SWB) is defined as “the degree to which an individual judges the overall quality of her or his life as a whole in a favorable way” (Veenhoven, 1984, p.22).

Internet addiction or Internet dependency is defined as the negative effects of excessive Internet use, which is similar to substance abuse with symptoms like tolerance, withdrawal syndrome, more time spent on online activities, and giving up many social, occupational, or recreational activities (Goldberg, 1995).

Little research has examined these two major potential consequences (i.e., subjective well-being and Internet addiction) of E-compulsive buying tendencies. Thus, this current study attempts to examine this specific issue related to virtual communities because many marketing activities and the current technological development in communication, such as the Internet, may have an influential role in online consumer behavior. Furthermore, the current study will help us to understand how consumers' E-compulsive buying tendencies may influence their subjective well-being and Internet addiction in their daily lives.

Purpose of the Study

Notwithstanding the aforementioned possible impact of characteristics of participants in virtual communities on E-compulsive buying tendencies and their consequences, the scarcity of empirical research related to this phenomenon has prompted this study. In addition, although early works have reported that psychological factors of self-regulation and emotional buying motives (e.g., mood) have influenced E-compulsive buying tendencies (Benson, 2006; Dittmar et al., 2007; LaRose & Eastin, 2002), we know very little about how these psychologically influencing factors may aid in enhancing and/or reducing the impact of participants' characteristics of virtual communities on E-compulsive buying tendencies.

Therefore, the central purpose of the study is to develop and empirically test the conceptual model of E-compulsive buying tendencies within the context of understanding its antecedents and consequences. The study has three specific objectives:

1. The first objective is to examine how various characteristics of virtual community participants affect their E-compulsive buying tendencies.
2. The second objective is to identify the consequences of consumers' E-compulsive buying tendencies as measured by subjective well-being and Internet addiction.
3. The third objective is to investigate the moderating effect of psychological factors (i.e., self-regulation, and emotional and mood enhancement) on the relationship proposed in the first objective.

Significance of the Study

The major significance of this study is to investigate the impact of virtual communities in social networking websites and product forums on online consumer behaviors. Theoretically, results of the current study contribute to existing, albeit limited, online compulsive buying behavior literature (e.g., Dittmar et al., 2007; LaRose & Eastin, 2002; Lee & Park, 2008; Lyons & Henderson, 2000) by providing a better understanding of how various participants' characteristics of virtual communities influence their E-compulsive buying tendencies, which in turn may have an effect on their subjective well-being and Internet addiction. Previous studies reported that consumers who engage in online activities (e.g., blogging) in different social networks tend to exhibit a high degree of addictive behaviors, for example compulsive buying tendencies and Internet addiction (Chen et al., 2004; Kozinets, 2002; Lee & Park, 2008), and virtual community activities also tend to display addictive behaviors (Novak et al., 2000; Wang & Fesenmaier, 2004). Hence, it is critical to investigate the relationship between participants' characteristics in virtual communities and their E-compulsive buying tendencies. In addition, the current study enhances our understanding of the moderating role of psychological factors (i.e., self-regulation and emotional and mood enhancement) in influencing E-compulsive buying tendencies.

The results of this study are beneficial to academicians, educators, online communities' policy makers. Educators can use the study as a foundation to further explore and investigate the potential impact of those who participate in virtual

communities on their E-compulsive buying tendencies and its related negative consequences. Additionally, the study provides information to assist consumer educators or policy makers of the virtual communities in regulating online marketing activities and information shared in the virtual communities. It is necessary to have strict policies posted in the online forums because virtual communities are mostly free and easy to join, so there are always people and marketers who just do “spamming” for their business benefits and to motivate people towards uncontrolled buying. Hence, this study helps policy makers to understand the harmful consequences of some marketing efforts (e.g., spamming product offers) practiced by online marketers participating in virtual communities. Therefore, this study is an initiative in setting the limitations for online marketers and online advertisers to exploit these online consumer groups in exchange for their financial gains.

Definition of Terms

The following are definitions of key terms used in this study.

Table 1
Definition of Key Terms

Terminology	Descriptions
Compulsive Buying Behavior	Repetitive and seemingly purposeful behaviors that are performed according to certain rules or in a stereotyped fashion (American psychiatric Association, 1985, p. 234).
Compulsive Buying Scale (CBS)	Compulsive Buying Scale is used to measure compulsive buying tendency (d’ Astous, Maltais, & Roberge, 1990).

Cyber Shopping	Shopping for goods and services on the Internet (MacMillan Dictionary, 2010).
E-Bulletin Boards	Space available for the members in the virtual communities to interact with different individuals or groups of people (Valck, Bruggen, & Wierenga, 2009).
Emotional Buying Motives	Emotional involvement and enhancement in shopping, such as buying in order to get a “buzz” and enjoyment, as well as motives to regulate or repair one’s emotions, where individuals shop and buy in order to improve their mood (Dittmar, Long, & Bond, 2007).
Information Seeking	Information seeking is defined as searching, comparing, and accessing information in a shopping context. (Rohm & Swaminathan, 2004, p.752).
Informative Conformity	The influence to accept information from others to evince the truth to reality (Deutsch & Gerard, 1955; Pendry & Carrick, 2001).
Lead Users	Lead users in a community of interest tend to be good problem solvers who are not afraid to share their solutions online within the community (Pitta & Fowler, 2005).
Normative Conformity	The influence to conform to the expectations of others (Deutsch & Gerard, 1955; Pendry & Carrick, 2001).
Social networking services	A social network service focuses on building and reflecting social networks or social relationships among people, e.g., those who share interests and/or activities (Casteleyn et al., 2008).
Virtual Communities	Affiliative groups whose online interactions are based upon a shared enthusiasm for, and knowledge of, a specific consumption activity or related group of activities (Valck et al., 2009).

Organization of the Study

Chapter 1 presents a background of the study, purpose of the study, and significance of the study. In addition, definitions of each key term are provided.

Chapter 2 contains a review of related literature on virtual communities, online compulsive buying tendencies, and the consequences E-compulsive buying tendencies. In addition, a discussion on conceptual framework that guided the current study is provided with suggested sets of testable hypotheses.

Chapter 3 describes research methodology, including measures, sampling, and procedure, as well as appropriate statistical analyses employed to test an individual hypothesis.

Chapter 4 presents statistical findings related to the hypotheses addressed in Chapter 2.

Chapter 5 offers discussions, conclusions, and implications derived from the study's findings. In addition, research limitations and future research directions are suggested.

CHAPTER II

REVIEW OF LITERATURE

This chapter details the relevant literature that sought to answer the research objectives discussed in Chapter 1. The literature review consists of seven major topics: (1) Cybershopping and its Nature; (2) Virtual Community and its Classifications; (3) Characteristics of Virtual Communities Members; (4) Compulsive Buying Behaviors; (5) The Consequences of E-Compulsive Buying Tendencies; and (6) Moderating Roles of Psychological Factors. Altogether, this information is then utilized as a foundation in developing testable hypotheses.

Cybershopping and its Nature

Over the past decade, cybershopping (or online shopping), a well-established shopping environment, has continued to gain popularity and has become the preferred shopping mode for many consumers (Fortson et al., 2007; Lokken et al., 2003). Many organizations are investing more and more in their websites with the purpose of making information about their products and/or services easily accessible to consumers (Hoffman & Novak, 2000). As such, the Internet has altered the way consumers search for and purchase products and/or services (Lokken et al., 2003; Shim, Eastlick, Lotz, & Warrington, 2001). In addition, the Internet not only provides opportunities for consumers to transact with the companies but also offers companies opportunities to heighten their competitive positions (Doherty & Ellis-Chadwick, 2009).

According to Datamonitor’s report in 2010, as compared to other regions around the world, the United States was the largest online retail sector in 2009 with the total revenue of \$134.9 billion, representing a compound annual growth rate (CAGR) of 11.50% for the period spanning 2005-2009 (see Table 2). In comparison, the online revenues from Europe and Asia-Pacific grew with CAGRs of 23.7% and 18.3%, respectively, over the same period to reach respective revenues of \$131.9 billion and \$57.3 billion in 2009. Table 1 further shows that U.S. online revenues in 2009 decreased almost 28% from the previous year. A current report by Datamonitor (2010) further indicated that performance of the U.S. online retail sector will be decelerated in the next few years with an expected online revenue of \$222.70 billion by the end of 2014 (Datamonitor, 2010).

Table 2
Revenues from Global Online Retail Sectors (in \$ Billion; 2005-2009)

Year	U.S.A	Europe	Asia-Pacific
2009	\$134.9	\$131.9	\$57.3
2008	\$186.7	\$33.8 ^a	N/A
2007	\$141.6	\$59.1 ^b	N/A
2006	\$114.2	\$40.6 ^b	N/A
2005	\$86.0	N/A	N/A

Source: Data Compilation from Datamonitor, 2006-2010

Note: N/A: Not Applicable; a: Only United Kingdom; b: United Kingdom and Germany

Specific to the online revenues in the United States, Datamonitor’s report (2010) revealed that electronic products generated the highest online revenue in the United States in 2009 with a total revenue of \$32 billion of the online sectors’ total value, equivalent to 23.71 % of the online retail’s overall value. Furthermore, sales of apparel,

accessories, and footwear generated the second highest revenue of \$22.30 billion, followed by books, music, and videos with a revenue of \$11.74 billion, equating to 16.50% and 8.70% respectively of the online retail's sector aggregate revenues (see Table 3).

Table 3
United States Online Retail Sector Segmentation: 2009

Product Category	\$ Billion	% Share
Electronics	32.00	23.70
Apparel/Accessories/Footwear	22.30	16.50
Books/Music/Videos	11.74	8.70
Others	68.86	51.00
Total	134.9	100

Source: Datamonitor (2010)

Despite the current global economic downturn, online retail sales continue to grow at a healthy rate (Datamonitor, 2010; Ho, Kauffman, & Liang, 2007) because of certain characteristics associated with this medium that draw significant attention from consumers; consequently, online shopping has become one of the most commonly accepted online activities among today's consumers (Fortson et al., 2007). A number of researchers have reported that, among other factors, ease of use, speed, and convenience are the main reasons for consumers to shop online (Jones & Vijayasathy, 1998; Pastore, 2000; Rowley, 1996). These factors are critical to online consumers because they reduce the cost of acquiring pre-purchase product information, enhance search efficiency, eliminate travel cost, and reduce the associated shopping frustrations (Jayawardhena & Wright, 2009; Lokken et al., 2003).

Similar to the traditional mode of shopping, the scope of the Internet and interactivity has provided consumers an unimagined level of access to information about products and/or services that may enhance their shopping efficiency (Goldsmith & Horowitz, 2006), motivating them to engage in online activities (Bellenger & Korgaonkar, 1980). Hence, information obtained via the Internet has become a major driving force for consumers to shop online. Consumers are now able to search, compare, and access information more easily than in offline shopping settings (Alba et al., 1997; Lynch & Ariely, 2000; Rohm & Swaminathan, 2002). In addition, Bakos (1991) stated that another benefit of online shopping is that it lowers the cost of acquiring pre-purchase product information while increasing the benefits of a broader array of product alternatives at a small incremental cost. Furthermore, previous studies showed that most online shoppers tend to search for product information from a website that sells similar products of interest, resulting in product purchase (Lokken et al., 2003; Pastore, 2000). For example, Lokken et al. (2003) conducted a comparative study between online and non online shoppers and found that almost 83 % of participants reported that they searched product information online prior to engaging in actual shopping behavior that occurred in either online or offline settings.

Virtual Community and its Classifications

The Internet has become a platform for effective communication channels that offer unparalleled opportunities to companies and consumers worldwide. As Deighton (1996) states, the interactive capability of the Internet aids in translating marketing into

conversation by “putting a more human face in marketplace exchanges without losing the scale of economies of mass marketing” (p. 151). Today’s consumers tend to engage in online activities to search for product information, including consumer reviews on products. They search information through several online resources such as online retail websites, product forums, and online communities on social networking websites. More specifically, consumers have started to associate with one another through online communities, also known as virtual communities, where they can share and seek information about their area of interest related to products, hobbies, and etc. (Goldsmith & Horowitz, 2006). These virtual communities provide consumers abundant product information, including consumer reviews and comments about products. For example, eBay hosts different online community groups in a number of product categories. Coca-Cola hosts a social site, Mycoke.com, for people to chat and share information about their common interests such as films, music, and games (Kim, Park, & Jin, 2008). Thus, community is one of three fundamentals of online retailing, in addition to content and commerce, which are referred together as the “3Cs” (Calkins, Farello, & Shi, 2000).

There are a number of definitions of virtual community found in the literature. For example, Rheingold (1993) defines virtual community as “social aggregations that emerge from the Internet when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace” (p. 5). Hagel and Armstrong (1997) offer the definition of virtual community as online space where the concept and commerce are integrated with the emphasis on member-generated content. Similarly, Kozinets (1999) refers to virtual community as the

“affiliative groups whose online interactions are based upon a shared enthusiasm for, and knowledge of, a specific consumption activity or related group of activities” (p. 254). In the current study, we adopt McDonough’s concept of virtual community, which is defined as any group of people who share a common bond, yet who are not dependent on physical interaction and a common geographic location (as cited in Farquhar & Rowley, 2006). Porter (2004) further suggests that virtual community can be characterized by five attributes: purpose (i.e., interaction content), platform (i.e., interaction design), place (i.e., interaction technological mediation), population (i.e., interaction pattern), and profit model (i.e., return on interaction).

Similar to traditional communities, members of virtual communities also establish and maintain social order, such as social norms and identity construction (Fox & Roberts, 1999). As a result, a virtual community serves as an important resource (information, knowledge, and socio-emotional support) for many individuals with various purposes, goals, and needs (Kim et al., 2008; Wiertz & de Ruyter, 2007). Researchers state that online shoppers tend to highly value information from these virtual communities, where consumers share their knowledge, experiences, and opinions about products and services that they obtain from a specific website or other websites (Valck et al., 2009). Thus, such information and reviews about products have become one of the major reasons that drive consumers toward online shopping, which consequently may influence consumers to participate in virtual product forums and communities online.

Classification of Virtual Communities

Virtual communities can be broadly classified into two different categories based on the type of people interacting in a particular virtual community: retailer-consumer relationship driven (i.e., organization-sponsored) or consumer-consumer relationship driven (i.e., member-initiated) communities (Farquhar & Rowley, 2006; Laudén & Traver, 2004). Organization-sponsored communities are generally sponsored either by commercial or non-commercial companies with a specific purpose, mission, or goal of a company. Examples of organization-sponsored communities include websites such as eBay and Amazon.com. Member-initiated communities, on the other hand, are established and managed by the members with an emphasis on social support and networking among members. Examples of member-initiated communities include cancer.com, facebook.com, and myspace.com (Jin, Park, & Kim, 2010; Laudén & Traver, 2004). Ridings et al. (2002) contended that information generated from member-initiated communities is essential in virtual communities because such content comes from the words and ideas generated during members' interactions and discussions (Jin, Lee, & Cheung, 2010). Farquhar & Rowley (2006) further asserted that a virtual community is more efficient when it works both ways. That is, the communication in a virtual community should be between retailer and consumer, as well as consumer to consumer, so that more reliable information is shared in the discussion forum. This type of information sharing will benefit all the fan followers and online shoppers, serving its purpose of existence.

In addition, virtual communities can also be classified into five categories on the basis of structure. These are boards, independent web pages, lists (i.e., email mailing lists), multiuser dungeons, and chat rooms (Kozinets, 1999). First, boards refer to electronic bulletin boards that are often organized around particular products, services, and/or lifestyles, whereas independent web pages are web rings thematically linked to World Wide Web pages. For example, www.epinions.com is a product-related website that shares valuable information posted by consumers for consumers. Furthermore, online retailers and consumers can share product information through discussion forums and independent web pages. Third, lists (i.e., email mailing lists) are collected based on common themes. The latter two types are multiuser dungeons and chat rooms, which are mostly fantasy-oriented, social, sexual, or relational in nature. Even though multiuser dungeons and chat rooms are less focused on marketplace and products, they still provide opportunities for market researchers to carry out their studies on virtual communities (Kozinets, 2002). Among these types of communities, this study concentrates on online bulletin boards (or E-bulletin boards) because they are one of the most interesting virtual communities in which most of the consumer-to-consumer and retailer-to-consumer interactions take place (Kozinets, 2002; Valck et al., 2009).

A number of previous studies (Dittmar et al., 2007; Lokken et al., 2003; Valck et al., 2009) have investigated product forum websites, online retailing websites, and compulsive shopping behavior. However, little has been examined regarding the potential impact of product forums in social networking websites such as Facebook and Twitter and other product/service related forums such as Amazon.com, Ebay.com, cnet.com, and

mouthshut.com on consumption behavior. Thus, there is a need to examine the importance of information shared about consumption behavior in virtual communities (e.g., online groups in social networking websites, shopping websites, and product/service related forum websites).

Types of Information shared in Virtual Communities

Information shared in virtual communities varies in many ways, ranging from reviews about a product, price range of a product in different stores, comparison of similar products, product usage experiences, troubleshooting or repair assistance, and assistance in improving product efficiency (Pitta & Fowler, 2005). Most of the discussion forums and independent websites of virtual communities expect membership, which is usually free (Valck, Bruggen, & Wierenga, 2009). That is, visitors who wish to participate and discuss within the online groups/discussion forum websites should register themselves as members so that they will be able to access and participate in the public forum conferences happening on those websites. For example, some apparel e-retailers' websites incorporate features such as interactive networking communities for customers and user-generated content such as customer-written review sites, so as to encourage consumers to engage in more online shopping (Seock & Bailey, 2007). There are numerous websites where specific subject discussions take place related to a certain product. Members usually add their opinion about a particular product or subject in the form of comments, feedback, and their beliefs about that particular subject or product. Hoffman and Novak's (2000) assertion that "the consumer is an active participant in an

interactive exercise of multiple feedback loops and highly immediate communication” reflects present-day reality (p. 66). In most of the websites, community organizers and online retailers also add their information about the products in discussion forums in the form advertisements or expert reviews. Thus, consumers who are planning to shop can read these product reviews and comments, and use the information as a source of confirmation in their decision-making process.

Another form of information shared in the virtual communities or discussion forums is retailers’ promotional advertisements on social networking websites. Retailers are making tremendous efforts in the current market to promote their products in order to maximize their revenue. Many retailers have acknowledged the importance of virtual communities and have begun to advertise their products online with the help of growing technology. These retailers advertise their products and promotional offers in many different ways, such as banner ads, in-line ads, pop-up ads, and pop-under ads and interstitials (Faber et al., 2004; Gao, Koufaris, & Ducoffe, 2004; Rodgers & Thorson, 2000). However, several studies reported that these online advertisements turned out to be annoying for most consumers (McCoy, Everard, & Loiacono, 2008; Wegert, 2002). Therefore, retailers have recognized the negative impact of these banners ads or pop-up ads and have turned to virtual communities as an alternative online channel to communicate information about their products with the customers. Consequently, these retailers have begun to approach customers in a more social and friendly way; that is, they start to get involved in virtual communities or product forums by becoming one of the members.

Several studies have been carried out to understand the influence of different types of advertisements (e.g., in-line ads, pop-up ads, and pop-down ads found on virtual space) on consumption behavior (Kwak, Zinkhan, & DeLorme, 2002; Saraneva & Saaksjarvi, 2008). However, advertisements about different products as information (e.g., consumer product review) through virtual communities on social networking websites have been limited, especially in terms of advertising in the E-bulletin boards. This form of advertising is somewhat similar to in-line ads, but most of the time the offers and other product details are published or posted by the consumers or community administrators without disturbing the flow of the conversation in the virtual community (Ridings, Gefen, & Arinze, 2006). Researchers also found that banner advertising in virtual communities has a better impact on consumption behavior than other types of online ads because it is an easy way to reach consumers (Gao, Koufaris, & Ducoffe, 2004). As a result, most online retailers are likely to post their new offers (i.e., products and/or services) in related virtual communities, anticipating that consumers will be likely to check for those offers. McCoy, Everard, and Loiacono (2008) suggested that these forms of advertising seem to work for a number of reasons. Likely, it helps the retailer increase their sales and also help the consumers to shop efficiently.

Characteristics of Virtual Community Participants

Several researchers have suggested that participants' characteristics may largely determine the magnitude of the impact of shared information on social networking websites on consumers' buying behavior (Huffaker, 2010; Kim, Park, & Jin, 2008; Lee & Park, 2008; Shen, Huang, Chu, & Liao, 2010). Based on the extant literature, we identify three major characteristics of the virtual community participants that may aid one to better understand online consumption behavior: conformity, participation level, and Internet expertise (Huffaker, 2010; Kim, Park, & Jin, 2008; Lee & Park, 2008; Shen et al., 2010).

Conformity

Social psychologists and consumer behaviorists have indicated a number of interpersonal interaction factors (e.g., conformity) that may influence interpersonal attraction and group interactions (Burnkrant & Cousineau, 1975; Deutsch & Gerrad, 1955; Kelman, 1961; Netemeyer, Bearden, & Teel, 1992). Although these factors have been investigated in the face-to-face personal interaction context, other researchers have reported that individuals can develop interpersonal relationships in the online environment (Bordia, 1997; Huffaker, 2010; Lee & Park, 2008; Shen et al., 2010). This is because members of virtual communities create and share information that is likely to be used to influence each other.

Preece (2001) conceptualizes a virtual community as consisting of two dimensions: sociability and usability. While sociability primarily reflects how well a

virtual community supports interpersonal interaction among members, usability refers to how much a virtual community facilitates interpersonal interactions among members with technology (i.e., human-computer interface). Several researchers also further suggest that the success of a virtual community is largely contingent on the social aspect of a virtual community (Tikkanen, Hietanen, Henttonen, & Rokka, 2009). As such, the social aspect (or sociability) of a virtual community is likely to exert an influence on members of virtual communities.

Burnkrant and Cousineau (1975) identified social influence (or conformity) as the tendency for individuals to establish opinions of a group norm as well as the tendency of individuals to comply with the group norm. Allen (1965) later offers another definition of conformity by defining it as one manifestation of social influence in lieu of the opposition of the other group members. According to Deutsch and Gerard (1955), there are two types of conformity: informative and normative conformity. Informative conformity is defined as “the influence to accept information from others to evince the truth of reality,” whereas normative conformity is defined as “the influence to conform to the expectation of others” (Deutsch & Gerrard, 1955, p. 629). Kelman (1961) explains that conformity operates via one or more of three unique processes, including internalization, identification, and compliance. Internalization occurs when an individual accepts the influence because it is perceived as “inherently conducive to the maximization of his values” (Kelman, 1961, p. 65). This means that individuals perceive the content as being inherently instrumental to the attainment of their goals. Identification occurs when the individual adopts others’ opinions or behaviors because the behavior or

opinion is “associated with a satisfying self-defining relationship” to themselves (Kelman, 1961, p. 63). Last, compliance occurs when the individual conforms to others’ expectations in order to receive award or avoid punishment derived from others.

Several virtual community studies have reported that conformity or social influence occurring in the online environment has an impact on individual decision-making (Huffaker, 2010; Kim, Park, & Jin, 2008; Lee & Park, 2008; Mottram & Fleming, 2009; Shen et al., 2010). Information exchanged or shared in a virtual community can positively influence a prospective consumer when he or she has a chance to view product information posted by those who have previous experience with the products. In addition, such exciting reviews and exaggerated positive experiences about a particular product/service posted by other members of virtual communities might promote the consumers to engage in purchase behavior of that product/service. Hence, it is likely that virtual communities may tend to socially reinforce the consumers to end up in product purchase and heavy product usage (Kozinets, 2002). All in all, normative conformity and informative conformity are considered to be major characteristics of those who participate in virtual communities in influencing their consumption behavior.

Online Participation Level

A virtual community with commerce (store referrals and advertisements) and content (product and company information) purposes has received considerable attention among consumers (Calkins et al., 2000; Kim et al., 2008). Members develop genuine relationships with these virtual communities because of common interests and ideas. As

such, the members are likely to demonstrate continuous relationships with each other, thereby demonstrating their loyalty by recommending membership to others and frequently patronizing that virtual community, which allows them to share their thoughts without any hesitation (Kim et al., 2008; Reichheld & Scheffer, 2000).

A number of researchers have indicated that site content and amount of interaction enhance members' participation in the virtual community (Hagel & Armstrong, 1997; Koh & Kim, 2004; Preece, 2001). Participation level refers to the extent to which the member frequents the virtual community through sharing, exchanging, or viewing information posted on the virtual community. For example, Hagel and Armstrong (1997) found that increased content of the website tends to draw more members to virtual communities. Koh and Kim (2004) reported that the more the members share information (by posting valuable information), the more likely the members will participate in the virtual community. In addition, the quantity and quality of membership in the virtual community may increase the participation level of the members. That is, if the virtual community has a greater number of members, it is more likely that it will draw other members to participate in its community (Butler, 2001). Shen et al. (2010) also contended that if the members perceive that other members are similar to them in terms of demographic characteristics or psychographic traits (e.g., lifestyle, personality), such familiarity among interacting members is likely to invite other members to frequent that virtual community more often. Thus, it is not surprising that many consumers participate in virtual communities because the inherent aspects of that virtual community (e.g., site content, quantity and quality of the participating

members) help them seek out information about products and/or services to reduce risks or uncertainties, making their purchase decision more efficient (Farquhar & Rowley, 2006; Ohanian, 1990; Valck et al., 2009). Information obtained from the virtual community could minimize uncertainties associated with purchase decision and aid consumer decision-making (Shen et al., 2010).

Perceived Internet Expertise

The Internet has become a major medium for communication, entertainment, shopping (Lokken et al., 2003; Shim et al., 2001) and marketing (Hoffman & Novak, 1996). The virtual community members' experiences of using the Internet may affect the way these members communicate information among each other on the virtual community (Hoffman & Novak, 1999). Driven by the definition of expertise provided by Shen et al. (2010), the current study defines perceived Internet expertise as the amount of knowledge the member possesses regarding Internet usage.

Members' Internet proficiency is considered to be a potential influence on their participation level in a virtual community (Farquhar & Rowley, 2006; Valck et al., 2009). Researchers contends that online consumers with a high degree of Internet skills are able to search for product information more effectively from search engines and other websites as compared to those with a lesser degree of Internet skills (Lokken et al., 2003). In addition, the members' perceived Internet expertise may encourage them to engage in member-to-member interaction in a virtual community. Hence, it is likely that consumers' perceived Internet expertise could be one of the important characteristics of

virtual community participants that may influence their online consumption behavior, as they can share and retrieve information from the virtual community when navigating through virtual space. Furthermore, along with the usability aspects (e.g., navigation and ease of access) of the virtual community (Preece, 2001), members' perceived Internet expertise may help them to better understand its influence on their online behavior, because such Internet skills may assist members' smooth use of the virtual community system.

Compulsive Buying Behavior

Since Faber et al.'s (1987) qualitative work and O'Guinn and Faber's (1989) phenomenological study on compulsive buying behavior, compulsive buying behavior has long been studied by numerous researchers because of its potential negative consequences associated with psychological and financial well-being (Dittmar et al., 2007; Faber & Christenson, 1996; Faber & O'Guinn, 1992; Faber, O'Guinn, & Krych, 1987; LaRose, 2001; LaRose & Eastin, 2002; Lee & Park, 2008; O'Guinn & Faber, 1989; Wang & Yang, 2007). Among these, compulsive buying behavior studies conducted by Thomas O'Guinn and Ronald J. Faber in 1992 have received considerable attention among academics and practitioners and have been widely cited in the literature. Compulsive buying is observed as part of a broader category of compulsive consumption behavior.

According to the American Psychiatric Association (1985), a compulsion is defined as "repetitive and seemingly purposeful behaviors that are performed according

to certain rules or in a stereotyped fashion” (p. 234). Thus, compulsive buyers tend to achieve gratification through the buying process itself. These behaviors are “excessive, ritualistic, and often performed to reduce anxieties that may arise due to obsessional thoughts” (O’Guinn & Faber, 1989, p. 147). Compulsive consumption is defined as “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 to others” (O’Guinn & Faber, 1989, p. 148). Many addictive or excessive behaviors are considered a form of compulsive consumption and have been labeled under this compulsive consumption definition with different names such as addictive, excessive, compulsive, habitual, abusive, and adjunctive behaviors, as well as impulse disorders (e.g., Benson, 2000; Benson & Gengler, 2004; Faber, 2004; Krych, 1989). One common factor which drives compulsive buying and other types of compulsive consumption is the motivation of the compulsive consumers (O’Guinn & Faber, 1989).

O’Guinn and Faber (1989) further described compulsive buying or compulsive shopping as “chronic, repetitive purchasing that becomes a primary response to negative events or feelings” (p.155). Such chronic behavior “becomes very difficult to stop and ultimately results in harmful consequences” (O’Guinn & Faber, 1989, p.155). Based on the compulsive buying behavior definitions previously referred to, a consumer can be classified as a compulsive buyer based on three major features of compulsive buying: experiencing buying urges as irresistible, losing control over buying behavior, and continuing with excessive buying regardless of harmful threats (Dittmar, 2004).

Generally, compulsive buyers have more desires to obtain products and material objects but have lower will power than normal buyers to resist such desires. This notion implies that the primary motivation of compulsive buyers is the alleviation of anxiety or tension through changes in arousal level rather than the desire for material acquisition (d'Astous, Maltais, & Roberge, 1990; O'Guinn & Faber 1989; Scherhorn, Reisch, & Raab, 1990). Even normal shoppers have motivational reasons behind their shopping, but compulsive buyers have different levels of motivation when compared to normal buyers (O'Guinn & Faber, 1989). Many researchers (e.g., Faber, 1992; Faber & Christenson, 1996) believe that there are always multiple motivating factors influencing compulsive buying tendency and that they can be biochemical, psychological, or sociological in nature.

Furthermore, LaRose (2001) employed Bandura's (1986) social cognitive theory to differentiate three possible connected buying behaviors: impulsive, compulsive, and addictive. LaRose contended that these three buying behaviors can be formed on a behavior continuum depending upon degrees of deficient self-regulation. Therefore, most consumers in general have a tendency to develop an impulsive buying behavior, which is defined as buying spontaneously, unreflectively, immediately, and kinetically (Rook & Fisher, 1995). However, for some consumers, the desire for specific products might shift to general desire for compulsive buying, which may become difficult to resist, causing chronic and repetitive purchasing (O'Guinn & Faber, 1989). As compulsive buying behavior progresses, this behavior can turn into a dependency type of addiction behavior (Marlatt, Baer, Donovan, & Kivlahan, 1988). Hence, the nature of compulsive buying

behaviors tends to unconsciously force the consumers to look for all possibilities to satisfy their irresistible urge towards buying. One potential source that may produce compulsive buying behavior among consumers is online shopping (Dittmar et al., 2007; LaRose, 2001; LaRose & Eastin, 2002; Lee & Lee, 2003; Lee & Park, 2008).

E-Compulsive Buying Tendencies

The Internet provides a variety of benefits to consumers, e.g., information search channels, entertainment, a place to escape and to meet people (Bessiere, Kiesler, Kraut & Boneva, 2008). For example, Lokken et al. (2003) reported that approximately 86% of shoppers prefer to search for information about product/services online due to several advantages associated with online shopping; product reviews, product comparisons, time saving, and convenience (Dittmar et al., 2007). At the same time, unique online characteristics, such as high accessibility, quantity and quality of inventory, and attractive online atmosphere may fuel consumers to spend more unnecessary time and money on online-related activities, e.g., playing online games, chatting, and shopping (Eastin, 2002; Lyons & Henderson, 2000). Therefore, it is evident that compulsive buying tendencies also occur in an online environment (Dittmar et al., 2007; Eastin, 2002; LaRose & Eastin, 2002; Lee & Lee, 2003; Lee & Park, 2008). Lee and Park (2008) further contended that the Internet may be the best alternative shopping means for those who compulsively shop in an isolated shopping setting, because these shoppers may like to avoid being reminded of normative standards important to others, leading them to shop alone online or home

shopping channels (LaRose, Mastro, & Eastin, 2001; Lee et al., 2000; Schlosser et al., 1994).

Lee and Park (2008) stated that E-compulsive buying could be one of the most interesting consumption behaviors to study on the Internet. According to the literature, numerous studies have examined several antecedents of compulsive buying tendencies, including the following factors: psychological factors such as self esteem (Faber, 1992), perceived social status (d'Astous & Tremblay, 1988), and fantasizing (O'Guinn & Faber, 1989); sociological factors such as peer pressure (d'Astous et al., 1990); personal and environmental factors such as shopping frequency (d'Astous et al., 1990; Dunn, 1993; Herbig et al., 1993), credit card usage and accessibility (Ritzer, 1995), and demographic factors such as age, gender and socioeconomic status (Faber, 1992; d'Astous, 1990, d'Astous & Tremblay, 1988; O'Guinn & Faber, 1989). However, there have been limited studies carried out to understand the influencing factors of compulsive shopping behavior influenced by Internet activities.

Online consumers spend a considerable amount of time gathering pre-purchase and post-purchase information through a variety of search engines (Bessiere et al., 2008). Increased use of search engines and product websites available online may lead consumers to likely use the Internet as an informational source to search for information about products and services (Bessiere et al., 2008; Lokken et al., 2003). Typically, consumers search for product and service information using several search engines such as google.com, yahoo.com and bing.com, and are directed from these website to various shopping websites, product forums, and virtual communities (Faber, Lee, & Nan, 2009).

Consumers' information sharing behavior in virtual communities, such as product reviews, may help facilitate a positive impact on consumer purchase behavior and the decision-making process (Gupta & Harris, 2010; Valck et al., 2009). On the other hand, Mottram et al. (2009) asserted that virtual communities could be a source that may signal the problematic use of the Internet. Experts have proven that virtual communities may result in negative consequences for the members (Ko & Kuo, 2009). Therefore, it is critical to examine the influencing role of virtual communities on E-compulsive buying behavior and possible related consequences.

The Consequences of E-Compulsive Buying Tendencies

As discussed earlier, the importance of compulsive buying tendencies has prompted the attention among academic practitioners and policy makers as an area of inquiry in consumer behavior research due to the potential negative consequences it may have on societies' and individuals' well-being (Dittmar et al., 2007; Faber et al., 1987; Faber & O'Guinn, 1992; Roberts, 1998; Shoham & Brencic, 2003). Although previous studies have examined the negative consequences related to compulsive buying tendencies in an offline context, few have examined the potential negative consequences of compulsive buying behaviors caused by online activities (Ko & Kuo, 2009). Two consequences (i.e., subjective well-being and Internet addiction) possibly resulting from E- compulsive buying tendencies will be examined in the following sections.

Subjective Well-being (SWB)

Compulsive buying has been described as a chronic, unregulated and repetitive purchasing behavior that “becomes a primary response to negative events or feelings” (O’Guinn & Faber, 1992, p. 459). This tendency may imply negative threats to an individual’s well being. Shoppers sometimes feel guilty after making an unplanned and impulsive purchase (Faber & O’Guinn, 1992; Roberts & Pirog, 2004). Specifically, several studies have reported that those who are compulsive tend to exhibit lower self-esteem, a higher degree of tendency to fantasize, and a higher degree of depression, anxiety, and obsession (O’Guinn & Faber, 1989; Roberts, 1998; Scherhorn, Reisch, & Raab, 1990). Compulsive buying may cause impairment due to cognitive and behavioral components, and these behavioral components may cause financial problems including bankruptcy and unexpected credit card debt (Roberts, 1998; Roberts & Pirog, 2004). Altogether, these emotional and psychological consequences caused by compulsive buying behaviors may harm the well-being of an individual. Thus, in this current study, the term subjective well-being (SWB) is employed to reflect an individual well-being, which is defined as “the degree to which an individual judges the overall quality of her or his life as a whole in a favorable way” (Veenhoven, 1984, p. 22).

In the 1960s, social scientists replaced macroeconomic indicators (e.g., GDP, rates of employment) with subjective well-being measures to assess an individual well-being (Bradburn, 1969; Bradburn & Caplovitz, 1965). Since then, there have been numerous studies that have examined an individual’s well-being, which have commonly viewed well-being as encompassing three separate but related components: (1) cognitive

evaluations of the conditions of one's life (e.g., overall satisfaction), (2) positive affective states (e.g., happiness), and (3) negative affective states (e.g., depression) (Campbell, Converse, & Rodgers, 1976; Diener, Emmons, Larsen, & Griffin, 1985). These three components of SWB are not considered a permanent or objective trait of an individual; rather, they seem to be sensitive to contextual change and are viewed from the respondents' perspectives.

According to some judgment theories, SWB is the result of a comparison between some standard such as other people and actual conditions (Diener, 1984). An individual's SWB is likely to be high when the actual condition exceeds the standard. However, an individual is likely to adapt to an event to ensure the degree of satisfaction or comfort he can possess, which consequently influences his judgment of standards and causes them to be revised upwards (French, Rodgers, & Cobb, 1974). Diener (1984) further asserted that an individual's standard can move upward or downward to any level or circumstance, and only departures from a given level can cause feelings of SWB. Other researchers also contend that, based on aspiration levels, individuals' SWB reflects the discrepancy between what they aspire to and what they perceive themselves as having. Thus, the degree of SWB depends on the gap between actual conditions and aspirations (Andrews & Robinson, 1991; Carp & Carp, 1982). Based on aspiration theory, high aspirations along with bad current conditions can result in negative SWB. Therefore, it can be concluded that the degree of SWB is contingent upon an individual personality and dispositional factors (e.g., ability to compare his standards with actual condition and

adaptation level), as well as situational environmental factors (Diener et al., 1999; Sirgy et al., 1998).

Marketing activities have a major influential role to play on SWB in both positive and negative ways. Particularly, many online marketers have employed virtual communities to market their products and maintain relationships with their customers. Nevertheless, the relationship between various marketing activities and quality of life has largely been unexplored in a number of settings (Pan, Zinkhan, & Sheng, 2010). In addition, there has been no known study carried out to understand the influence of virtual communities on E-compulsive buying tendencies and its impact on an individual's subjective well being. Therefore, the importance of the study of consequences of E-compulsive buying tendencies signals additional inquiry in consumer behavior research.

Internet Addiction

Online shopping evolved in such a way that it is attracting more users to shop and spend money on online retail websites. Different products such as electronic gadgets, apparel and accessories, and other consumer products are available online, and online shopping sales are steadily increasing (Lokken et al., 2003; Pastore, 2001). Internet addiction may be one major consequence of E-compulsive buying tendencies that may be a result of the involvement in virtual communities. In general, online users come with different intentions and expectations about the online environment (Chen, Tarn, & Han, 2004). In particular, online shoppers tend to display high intentions and expectations related to the product they wish to purchase. Hence, experienced online shoppers

involved in virtual communities or product forums about product information and reviews tend to actively participate in discussion forums related to products (Valck et al., 2009). Compulsive shoppers use online shopping modes as a way to bypass control of their shopping behavior (Lee et al., 2000; Lejoyeux et al., 1999), where they might tend to spend more time online and become dependent on it when they are alone.

Coined by Goldberg (1996), “Internet addiction” (or Internet dependency) was used to describe the negative effects of excessive Internet usage on one’s life. Similar to substance abuse (e.g., drugs), addicts can suffer physically and emotionally from the substance dependency. Goldberg (1996) recognized that non-substance dependency can be a legitimate type of addiction (i.e., Internet addiction), and refers to Internet addicts as dependent users habitually exposing themselves to a substance. Similarly, Young (1998) defined Internet addiction as a pathological use of the Internet. Elliott (2004) contended that such addictions can best be understood as learned adaptive behavior. Several studies have reported symptoms of Internet addiction, including a need for markedly increased amount of time online, anxiety resulting from a reduction of Internet use, obsessive thinking about the Internet, dreams about the Internet, a great deal of time spent on online activities, and withdrawal from social, occupational, and recreational offline activities (Beard, 2002; Beard & Wolf, 2001; Goldberg, 1996; Kubey, Lavin, & Barrows, 2001).

Internet addiction levels vary based on the online user’s intentions and dependence level to go online. Griffiths (1999) treated such addiction as a type of behavioral or technical addiction. Thus, in the current study, Internet addiction is used to describe the pathological use of online shopping. Those who are addicted to the Internet

are likely to depend on using this interactive medium habitually. Researchers stated that such dependency toward the medium tends to increase when the goals are accomplished by that particular medium (Ball-Rokeach & DeFleur, 1995). Patwardhan and Yang (2003) asserted that Internet dependency signifies a positive relation with online shopping activities.

Furthermore, Shaffer (1996) suggested that addictions can be either harmful or beneficial. Glasser (1976) also stated that addiction can be positive, healthy, and beneficial to one's life. Alexander and Schweighofer (1998) defined positive addiction to be "overwhelmingly involved with using and/or obtaining it, pervades total life activity and controls behavior in a wide range of circumstances, and high tendency to resume use after stopping" (p. 154). Although positive Internet addiction is considered beneficial to oneself, such addiction still shares some negative (or pathological) symptoms such as repetitive use. It is found that online users with a high degree of Internet addiction tend to be involved in various online activities, including online chats, email, surfing, searching for information, and engaging in online communities' discussions (Young, 1997; 1998). Online shopping is one of the major activities that requires demanding amount of time and knowledge of users, causing consumers to spend more time online. This is because online shoppers use the virtual communities and other product related forums to search for pre-purchase and post-purchase information (Chen, Tarn, & Han, 2004). Even though there have been few studies carried out to understand the Internet users' practices and their addiction levels, there is not enough evidence to support the idea that virtual

communities and e-compulsive buying behavior cause Internet addiction among online consumers.

Moderating Role of Psychological Factors

Preliminary evidence suggests that emotional motives and self-regulation are present not only in conventional shopping environments, but also on the Internet (Dittmar, 2004a; Dittmar, 2004b; Dittmar, Long, & Bond, 2007; LaRose & Eastin, 2002). Thus, these two psychological factors are included in the current study because of their impact on E-compulsive buying tendencies in the current study.

Emotional and Mood Enhancement

Compulsive buying tendencies occur for many reasons. Many studies have proven that emotional and mood enhancement is one of the major reasons behind compulsive buying tendencies among consumers (Dittmar, Long, & Bond, 2007). Dittmar et al. (2007) noted that the emotional buying motive covers “emotional involvement and enhancement related to shopping such as shopping in order to get a ‘buzz’ and enjoyment as well as motives to regulate or repair one’s emotions, where individuals shop and buy in order to improve their mood (i.e., retail therapy)” (p. 339). Previous studies reported that, as compared to ordinary buyers, compulsive buyers tend to exhibit greater mood changes both prior to and after shopping (Dittmar, 2001; 2005a; Faber & Christian, 1996), causing them to experience more negative emotions prior to buying and a greater “high” right after the purchase (Dittmar et al., 2007). Several

clinical researchers also asserted that mood regulation and the alleviation of anxiety or depression have been employed to characterize compulsive buyers (Benson, 2006; Black, 2004; Faber, 2004). Therefore, compulsive buyers might consider their purchasing habits as a self-medicating process that provides relief or escape from negative emotions.

In addition, some psychological factors such as low self-esteem, depression, anxiety, and a desire for recognition and approval contribute emotional reasons to engage in compulsive buying (Faber & Christenson, 1996). Others reported that some sociological factors such as early family experiences, gender roles, and the general disintegration of modern life may contribute to compulsive buying behaviors (Elliot, 1994; Faber & O'Guinn, 1988; Friese & Koenig, 1993; Scherhorn et al., 1990). Together, these psychological and sociological factors may provide short-term positive mood elicitation, overcoming some negative mood levels. Consumers who assume and assure themselves that repetitive or compulsive buying gives a positive feel develop such behaviors as a means of finding a feeling of happiness. However, they do not realize what is happening to their finances (Faber & Christianson, 1996). Furthermore, researchers stated that consumers tend to evaluate marketing stimuli based on their emotion or mood (Gardner, 1985; Srull, 1984). Studies related to compulsive buying and other impulsive disorders suggest that these behaviors are used as motivational tools to change or manage moods (Faber & Christenson, 1996). Faber and Christenson's (1996) report showed three different types of moods found among compulsive buyers, including boredom (47.8%), sadness/depression (39.1%), and anxiety (34.8%). These results provided the idea that compulsive buyers tend to be motivated to shop excessively because of negative moods

such as the three aforementioned types. In addition, their results also support the general belief that compulsive buyers have higher levels of depression and anxiety than ordinary shoppers. Hence, emotional and mood elicitation are considered important moderators in studying the relationship between virtual communities and compulsive shopping tendencies.

Self-Regulation

A number of researchers have contended that compulsive buyers are likely to possess a high degree of deficient self-regulation levels (Faber & O'Guinn, 1992; LaRose, 2001; LaRose & Eastin, 2002; O'Guinn & Faber, 1989). Self-regulation is defined as the "self's capacity to alter its own states and consequences" (Baumeister, 2002, p. 670). Specifically, LaRose and Eastin (2002) noted that deficient self-regulation is a transient state and further defined deficient self-regulation as "a state in which conscious self-control is diminished. It is manifested in the symptoms of impulsive, compulsive, and addictive buying; but those symptoms are interpreted as indicators of defective self-regulation rather than as a personality trait" (p. 552). Thus, deficient self-regulation is considered a factor that overrides irresistible thoughts or uncontrolled behavior (Baumeister, 2002). According to Bandura (1986), there are two socio-cognitive variables intertwined with self-regulation: self-efficacy and outcome expectations. Self-efficacy refers to one's belief in his or her own ability to engage in conduct that yields important attainments (Bandura, 1997). It is evident that self-efficacy is a critical factor in determining an individual's online shopping behavior (LaRose, Mastro, & Eastin,

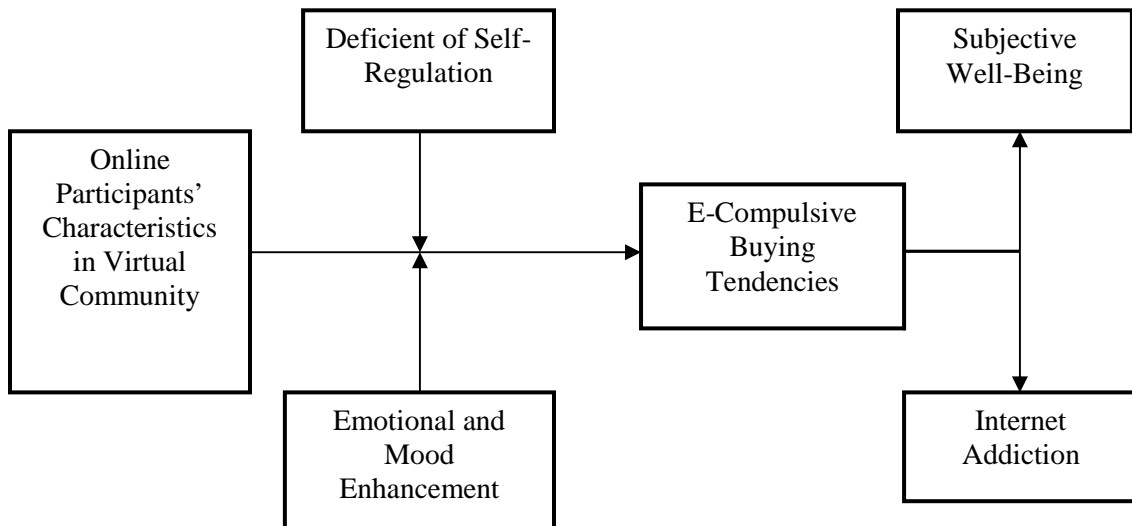
2001) and adoption of Internet activities such as online gaming (Eastin, 2002). However, self-efficacy may be an insufficient predictor of online behavior. One must have outcome expectations, which refers to beliefs about behavioral consequences (LaRose & Eastin, 2002). Steinfield and Whitten (2000) suggested that positive outcome expectations (e.g., reducing searches for product information and transaction costs; finding good bargains on the Internet) draw people to engage in online shopping. LaRose and Eastin (2002) asserted that such rational buying motives “oppose deficient self-regulation as consumers struggle to maintain rational behavior through consideration of shopping outcomes” (p. 552), and thus, those compulsive buyers are likely to act without rational buying motives.

Online shopping has become a major alternative for unregulated buyers, as they prefer to shop alone so as to avoid the standards of normal buying (Lee, Lennon, & Rudd, 2000; Lejoyeux et al., 1999). Compulsive buyers tend to lose control, buying for the moment and forgetting their financial conditions (Baumeister, 2002). Consumers’ interactions in virtual communities work in a similar way, as on-site chat rooms and e-mail exchanges can be considered as possible reasons for weakened self-regulation among online consumers (LaRose, 2001). Previous studies about unregulated buying mentioned that many exciting features like interactive graphics, product descriptions using fantasy imagery, and e-mailed deal alerts weakened the consumer’s self-regulation (LaRose, 2001). However, no known studies have been carried out to understand the important role of virtual communities as a medium that may influence online consumers’ self-regulated behavior.

Conceptual Framework

Figure 1 presents a conceptual model for this study that consists of (1) antecedent variables related to characteristics of online participants in virtual communities, (2) E-compulsive buying tendencies, and (3) outcomes of E-compulsive buying tendencies. In addition, the model also includes psychological factors moderating the relationships between antecedent variables related to characteristics of online participants in virtual communities and E-compulsive buying tendencies. Specifically, the model suggests that characteristics of online participants in virtual communities (i.e., conformity, online participation level, and perceived Internet expertise) influence their online compulsive buying tendencies, which in turn affects their subjective well-being and Internet addiction. Furthermore, two psychological factors (i.e., emotional and mood enhancement as well as self-regulation) are expected to moderate the relationships between characteristics of online participants in virtual communities and E-compulsive buying tendencies.

Figure 1: Conceptual Model



Hypotheses Development

Development of Hypothesis 1

Hypothesis 1 concerns the influence of characteristics of online participants in virtual communities on E-compulsive buying tendencies. As discussed earlier, three major characteristics (i.e., conformity, online participation level, and perceived Internet expertise) of online participants in virtual communities are expected to influence their E-compulsive buying tendencies. Researchers reported that information shared and/or exchanged among members in a virtual community is likely to influence these members in two ways: information conformity and normative conformity (Lee & Park, 2008). That is, these online members may accept information shared by and/or exchanged with others

(i.e., information conformity) and these members may sometimes feel obligated to respond to others' concerns and/or thoughts about their product choice and usage (i.e., normative conformity) (Calder & Burnkrant, 1977; Kozinets, 2002). In addition, previous studies have suggested that informative and normative conformity plays an important role in affecting consumers' buying tendencies (Bearden, Netemeyer & Teel, 1992; Burnkrant & Cousineau, 1975).

Consumers are likely to search for product information using different search engines. As such, many of these online consumers tend to rely on information shared by other consumers who have used the products before. Some online consumers may participate in a number of virtual communities because these communities are easily accessible; they may also believe that information shared in the community is reliable and credible. Thus, when consumers need quick advice or a review about their product choice, they tend to check with the related product communities to confirm to themselves that they are making the right decision. Therefore, consumers analyze impulse shopping ideas based on quickly available information, such as other members' reviews, in online communities related to the product under consideration (Park & Lee, 2008).

Furthermore, several studies revealed that compulsive buying behaviors also occur in online shopping environments (LaRose & Eastin, 2002; Lee & Lee, 2003). Similarly, a recent study conducted by Lee and Park (2008) also reported a relationship between conformity and E-compulsive buying tendencies. Therefore, it is hypothesized that:

H1a: The characteristics of virtual community participants related to informative conformity will affect their E-compulsive buying tendencies.

H1b: The characteristics of virtual community participants related to normative conformity will affect their E-compulsive buying tendencies.

Virtual communities are online groups where members interact with each other regarding common discussion topics or products of interest. Researchers have stated that the major reasons consumers decide to join virtual communities is because of their informational and instrumental values (Valck et al., 2009). The content and commerce purposes offered by the virtual communities tend to draw traffic to that particular website (Calkins et al., 2000; Kim et al., 2008). Regular visits and long periods of time spent in virtual communities are likely to expose consumers to more information and communication about consumption activities among members. The members of virtual communities may even inform other members who are passively participating in the discussion forum (Hoffman & Novak, 1996). Several studies reported that the site content and the amount of interaction among members in virtual communities tend to increase the degree of participation among the members of that particular site (Chen, Chen, & Kinshuk, 2009; Hagel & Armstrong, 1997; Preece, 2001). Furthermore, Koh and Kim (2004) found that the higher the degree of shared information by the members, the greater the likelihood that these members will participate in the virtual community. Thus, it is expected that:

H1c: The characteristics of virtual community participants related to participation level will affect their E-compulsive buying tendencies.

The last characteristic of participants in virtual communities investigated in the current study is their degree of perceived Internet expertise, which is defined as the amount of knowledge one has about Internet usage. Consumers' exposure time to the Internet and number of hours spent on several Internet activities on an everyday basis (e.g., checking e-mail, searching for product information, posting information on a blog, and etc.) may also help determine their degree of perceived Internet expertise (Valck et al., 2009). Lokken et al. (2003) asserted that consumers' skills in surfing the Internet, including the ability to search effectively via different search engines and other websites, may influence their online consumption habits. Furthermore, researchers contended that virtual community members' Internet expertise may potentially affect their participation levels in that virtual community (Farquhar & Rowley, 2006; Valck et al., 2009), which in turn may influence their E-compulsive buying tendencies. Based on information discussed in this section, the following is anticipated:

H1d: The characteristics of virtual community participants related to Internet expertise will affect their E-compulsive buying tendencies.

Development of Hypothesis 2

Hypothesis 2 is concerned with the influence of E-compulsive buying tendencies on subjective well-being and Internet addiction. Much of the previous research on

compulsive buying has focused on negative outcomes affecting psychological and financial well-being resulting from compulsive buying that occurred in conventional shopping environments (Faber & Christenson, 1996; Faber & O'Guinn, 1992; Roberts, 1998). Recently, several researchers reported that uncontrolled, repetitive, and excessive buying behaviors also occur in online shopping environments (Dittmar et al., 2007; LaRose, 2001; LaRose & Eastin, 2002; Lee & Park, 2008; Lyons & Henderson, 2000; Wang & Yang, 2007). These researchers suggested that many e-commerce websites contain interesting features that may stimulate compulsive buying tendencies. Furthermore, there is ample research related to consumer addiction on eBay, compulsive online shoppers, and online shopaholics found on discussion forums (Greenfield, 1999; Pew Research, 2001).

Specific to the online shopping environment, Mottram et al. (2009) recently suggested that virtual communities can potentially negatively impact members due to their high degree of online-related activities. However, very few studies have examined the negative consequences of compulsive buying tendencies caused by online activities (Ko & Kuo, 2009). Despite insufficient evidence regarding the negative threats caused by online compulsive buying tendencies, it is believed that uncontrolled buying can result in harm to one's well-being and excessive use of the Internet (Chen et al., 2004). These two major consequences have been found to create serious emotional and physical threats to compulsive buyers (Goldberg, 1995; O'Guinn & Faber, 1989; Scherhorn et al., 1990). Based on the aforementioned information, we suggest the following hypotheses:

H2a: The participants' E-compulsive buying tendencies will affect their subjective well-being.

H2b: The participants' E-compulsive buying tendencies will affect their level of Internet addiction.

Development of Hypothesis 3

Hypothesis 3 is concerned with the influence of the moderating role of self-regulation on the relationships between characteristics of online participants in virtual communities and E-compulsive buying tendencies. Research suggests that compulsive buyers tend to display deficient self-regulation as compared to those with a high degree of self-regulation, which in turn influenced their shopping activity (Faber, Christenson, De Zwaan, & Mitchell, 1995; Faber & O'Guinn, 1992; LaRose, 2001; LaRose & Eastin, 2002; O'Guinn & Faber, 1989). LaRose (2001) explained that many online websites employ abundant use of interesting features that can challenge self-regulation. In addition, previous studies have indicated a negative relationship between self-control and compulsive buying tendencies (Baumeister, 2002; Faber, Christenson, De Zwaan, & Mitchell, 1995; Vohs & Faber, 2007). That is, compulsive buyers tend to possess low self-control. Failure to regulate oneself is a major cause for unregulated behavior such as compulsive behavior (Baumeister, 2002). Researchers have stated that the buying process may give a greater amount of pleasure to compulsive buyers than actually owning that particular product (O'Guinn & Faber, 1989). Therefore, unregulated behaviors such as compulsive buying may occur just to alleviate buyers' emotions and mood levels. As a

result, one's feeling of compulsion may get stuck between a feeling of self-regulation and a sense of satisfaction, which consequently causes the individual to buy that product for a moment of enjoyment and full satisfaction (Baumeister, 2002). Based on the information discussed, we expect that self-regulation may display different degrees of moderating effects on the relationships between three different characteristics of online participants in virtual communities (i.e., conformity, participation level, and Internet expertise) and their E-compulsive buying tendencies. Specifically, we offer the following hypotheses:

H3a: Self-regulation will moderate the relationship between characteristics of virtual community participants related to informative conformity and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to informative conformity will affect their E-compulsive buying tendencies less strongly when they display a high degree of self-regulation as compared to when they display a low degree of self-regulation.

H3b: Self-regulation will moderate the relationship between characteristics of virtual community participants related to normative conformity and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to normative conformity will affect their E-compulsive buying tendencies less strongly when they display a high degree of self-regulation as compared to when they display a low degree of self-regulation.

H3c: Self-regulation will moderate the relationship between characteristics of virtual community participants related to participation level and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to participation level will affect their E-compulsive buying tendencies less strongly when they display a high degree of self-regulation as compared to when they display a low degree of self-regulation.

H3d: Self-regulation will moderate the relationship between characteristics of virtual community participants related to Internet expertise and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to Internet expertise level will affect their E-compulsive buying tendencies less strongly when they display a high degree of self-regulation as compared to when they display a low degree of self-regulation.

Development of Hypotheses 4

Hypothesis 4 is concerned with the influence of the moderating role of emotional and mood enhancement on the relationships between characteristics of online participants in virtual communities and E-compulsive buying tendencies. Researchers have indicated that emotional buying and mood enhancement shopping motives (i.e., “retail therapy”) are important motives behind compulsive buying (Dittmar et al., 2007). Compulsive buying behavior has been described as a form of “self medication” designed to assist

consumers in relieving their depressed mood levels and negative emotions. Furthermore, research suggests that consumers are likely to believe that the shopping process and acquisition of material objects may bring happiness, improving their emotions and mood, which in turn ends up becoming a compulsive behavior (Dittamar, Long, & Bond, 2007). Based on the aforementioned information, we expect that emotional and mood enhancement may exhibit different degrees of moderating effects on the relationships between three different characteristics of online participants in virtual communities (i.e., conformity, online participation level, and perceived Internet expertise) and their E-compulsive buying tendencies. Specifically, we offer the following hypotheses:

H4a: Emotional and mood enhancement will moderate the relationship between characteristics of virtual community participants related to informative conformity and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to informative conformity will affect their E-compulsive buying tendencies more strongly when they display a high degree of emotional and mood enhancement motives as compared to when they display a low degree of emotional and mood enhancement motives.

H4b: Emotional and mood enhancement will moderate the relationship between characteristics of virtual community participants related to normative conformity and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to normative conformity will affect their E-compulsive buying tendencies more strongly

when they display a high degree of emotional and mood enhancement motives as compared to when they display a low degree of emotional and mood enhancement motives.

H4c: Emotional and mood enhancement will moderate the relationship between characteristics of virtual community participants related to participation level and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to participation level will affect their E-compulsive buying tendencies more strongly when they display a high degree of emotional and mood enhancement motives as compared to when they display a low degree of emotional and mood enhancement motives.

H4d: Emotional and mood enhancement will moderate the relationship between characteristics of virtual community participants related to Internet expertise and their E-compulsive buying tendencies. That is, the characteristic of virtual community participants related to Internet expertise level will affect their E-compulsive buying tendencies more strongly when they display a high degree of emotional and mood enhancement motives as compared to when they display a low degree of emotional and mood enhancement motives.

Chapter Summary

The primary objective of this chapter is to provide relevant information related to the key constructs of virtual communities and participants' characteristics in virtual communities, E-compulsive buying tendencies and its consequences related to subjective well-being and Internet addiction, and moderating roles of psychological factors (e.g., self-regulation and emotional and mood enhancement). This information is then used to develop a number of testable hypotheses. The hypothesized relationships are empirically examined in the following chapter using a self-administered survey approach.

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents the proposed methodology, including (1) Sample and Data Collection, (2) Questionnaire Development and Pretest, (3) Measures, (4) Statistical Analysis, and (5) Chapter Summary.

As noted in Chapter 1, the following three major research objectives guided this study:

1. The first objective is to examine how various characteristics of virtual community participants affect their E-compulsive buying tendencies.
2. The second objective is to identify the consequences of consumers' E-compulsive buying tendencies as measured by subjective well-being and Internet addiction.
3. The third objective is to investigate the moderating effect of psychological factors (i.e., self-regulation, emotional and mood enhancement) on the relationship proposed in the first objective.

Details are provided below about the methodology to be employed to accomplish these objectives.

Sample and Data Collection

Selecting potential and reliable participants for this study was as equally important as selecting the appropriate variables for the study. Since the major purpose of the study was to examine the impact of characteristics of virtual communities participants on their E-compulsive shopping tendencies and its consequences, those who were at least 18 years old and had participated in any virtual communities such as online chat rooms, bulletin board systems (BBS), newsgroups, instant messaging, discussion forums, and/or social networking sites and weblogs were deemed appropriate in the study.

Data was collected in spring of 2011 through a convenience sample of undergraduate students attending the University of North Carolina at Greensboro. In-class self-administered surveys were conducted, partly to secure the sample size as needed. These students were recruited with the permission of instructors from a number of Consumer Apparel and Retail Studies department classes: APD 242 (Design Principles Applied to Textile Products); CRS 221 (Culture, Human Behavior, and Clothing); RCS 261 (Introduction to Consumer Retailing); RCS 361 (Fundamentals of Retail Buying and Merchandising); and CRS 481 (Contemporary Professional Issues in Consumer, Apparel, and Retail Studies). These students were asked to voluntarily participate in the study. Those who agreed to participate in the current study were given two identical consent forms to read and sign. They were required to return one signed copy to the researcher and keep the other one for their personal records. After receiving the signed copy of the consent form, the researcher handed out the questionnaire for them to complete. Because

some students may have been taking more than one above courses during the semester, a preventive measure was taken to avoid repetitive completion of the questionnaire from the same participants by asking whether they had filled out the questionnaire in any other class/classes before. If they answered yes, these students were excluded. Excluding the repetitive student participants, 220 responses were collected from these six classes.

We used students as a sampling frame due to a number of reasons. First, students tend to be homogeneous in nature (i.e., less noise or extraneous variation), which is desirable for theory testing (Calder et al., 1998; Vishwanath, 2005). Second, college students are likely to have high degree of involvement in a variety of Internet activities, such as online information search and shopping, networking, and online games (Fortson et al., 2007; Young, 2009; Young, 2004). Third, they are technology savvy (Junco & Cole-Avent, 2008).

Questionnaire Development and Pretest

Based on the comprehensive review of extant literature, a questionnaire was developed to measure six major constructs (i.e., characteristics of virtual community participants, E-compulsive buying tendencies, subjective well-being, Internet addiction, self-regulation, and emotional enhancement and mood enhancement) proposed in the conceptual model. Participants were also asked to indicate their daily Internet usage frequency (e.g., checking email, browsing retailers' websites) and online shopping frequency during the past three months. Furthermore, participants were asked to indicate whether or not they have participated in any virtual communities and the frequency of

their participation in these virtual communities. These questions were employed to solicit participants' responses that were deemed to be appropriate to the context of the current study. Lastly, demographic data (e.g., age, gender, ethnicity, income) were included as well.

Pretest of the Questionnaire

The pretest was conducted in the classroom setting (i.e., RCS 464: Multichannel multicultural Retailing) in the fall 2010 semester with a convenience sample of 30 undergraduate students (n=30) majoring in retailing and consumer studies at the University of North Carolina at Greensboro. The pretest was conducted as a means to enhance the clarity, readability, and comprehension of the measurement items. As a result, some slight modifications related to the wording and spacing were addressed for the final instrument.

Measures

Table 4 summarizes the major constructs employed (i.e., characteristics of virtual community participants, E-compulsive buying tendencies, subjective well-being, and Internet addiction), including two moderators of self-regulation and emotional and mood enhancement in the current study. Below is detailed information pertaining to each construct.

Characteristics of Virtual Community participants

Participants' characteristics in virtual communities were assessed on three different characteristics, which were consumer conformity, online participation level, and perceived Internet expertise. First, the consumer conformity scale was adapted from Bearden, Netemeyer and Teel's (1989) Consumer Susceptibility to Interpersonal Influence Scale (CSIIC), consisting of twelve items. As discussed in Chapter 2, the scale consists of two categories represented by multiple items: 1) informative conformity (e.g., "I often consult others in the virtual community to help choose the best alternative available") and 2) normative conformity (e.g., "If I want to be like someone in the virtual community, I often try to buy the same brands that they buy"). Evidence of acceptable reliability and validity of the scale has been reported in previous studies (Bearden & Rose, 1990; Lee & Park, 2008; Meyer & Anderson, 2000). The participants were asked to indicate their responses on a 7-point Likert-type scale where 1 = "disagree completely" and 7 = "agree completely."

Second, the participants' online participation level scale that consisted of five items (e.g., frequency of online community visits) was adopted from Valck, Bruggen and Wierenga (2009). Valck et al. (2009) also reported evidence of acceptable reliability and validity of the scale. For items related to frequency of visit, information retrieval, information supply, and information discussion, the participants were asked to indicate their responses based on a 7-point Likert-type scale where 1 = "not often at all" and 7 = "very often." For an item related to duration of visit, the participants were asked to

indicate their responses based on a 7-point Likert-type scale where 1 = “do not stay long” and 7 = “stay very long.”

Last, perceived Internet expertise scale (IES), consisting of three items (i.e., perceived Internet expertise, adaptation to online group features, and comfort level using online retail websites), was adopted from Lokken et al. (2003). Lokken et al. (2003) also reported an evidence of acceptable reliability and validity of the IES. Consumers’ perceived Internet expertise level was measured on a 7-point Likert-type scale where 1 = “novice” and 7 = “expert.” Perceived level of easiness to get adapted to the online group features was measured on a 7-point Likert-type scale where 1 = “very difficult” and 7 = “very easy.” Comfort level when using online retail websites was measured on a 7-point Likert-type scale where 1 = “very uncomfortable” and 7 = “very comfortable.”

E-Compulsive Buying Tendencies

E-compulsive buying tendencies were operationalized using d’ Astrous, Maltais, and Roberge’s (1990) modified Compulsive Buying Scale (CBS) consisting of ten items. These items captured three important aspects of compulsive buying: irresistible urges to buy (e.g., “I often have a real desire to go online shopping and buy something”), loss over buying behavior (e.g., “I often buy something I see on the Internet without planning to, just because I’ve got to have it”), and continuing buying despite negative consequences (e.g., “I have often bought a product that I did not need, even when I knew I had very little money left”). Evidence of acceptable reliability and validity of the scale has been reported in several studies (Dittmar, 2005; Dittmar et al., 2007; Elliott, 1994). The ten

items adapted for the study requested that participants indicate their responses based on a 7-point Likert-type scale where 1 = “disagree completely” and 7 = “agree completely.”

Subjective Well-Being

In order to capture cognitive and affective aspects of subjective well-being, two major scales were employed in the current study. That is, the cognitive aspect of subjective well-being was operationalized using Diener et al.’s (1985) Satisfaction with Life Scale, consisting of five items (e.g., “In most ways my life is close to ideal”). Evidence of reliability and validity of the scale has been reported in many previous studies (Burroughs & Rindfleisch, 2002; Shek, 2008; Swami & Chamorro-Premuzic, 2009). The participants were asked to indicate their responses based on a 7-point Likert-type scale where 1 = “disagree completely” and 7 = “agree completely.” The ten items of Campbell, Converse and Rodger’s (1976) Index of General Affect was employed to tap both positive (eight items) and negative (two items) affects of subjective well-being. Evidence of reliability and validity of the scale has been reported in literature (Burroughs & Rindfleisch, 2002; La Barbera & Gurhan, 1997; Robinson, Shaver, & Wrightsman, 1991). The participants were asked to evaluate their lives on 7-point semantic differential scales (e.g., “Miserable/Enjoyable,” “Easy/Hard”).

Internet Addiction

The Internet addiction scale was adapted from Young (1998) and consisted of eight items (e.g., “Do you feel the need to use the Internet with increasing amount of time

to achieve satisfaction?”). The scale has revealed evidence of acceptable reliability and validity in previous studies (Wang & Yang, 2007; Weinstein & Lejoyeux, 2010; Young, 2004). Participants were asked to indicate on a 7-point Likert-type scale where 1 = “disagree completely” and 7 = “agree completely.”

Self-Regulation

Self-regulation was measured using the Brief Self-control scale (BSCS) developed by Tangney, Baumeister, and Boone (2004), which has a high reliability ($\alpha = 0.85$). Five items have been selected from a total of 13 items of BSCS so as to fit appropriate to the current study. BSCS helps to assess control over thoughts, emotional control, and impulse control (e.g., “I am good at resisting temptation”). The participants were asked to indicate their responses based on a 7-point Likert-type scale where 1 = “disagree completely” and 7 = “agree completely.”

Emotional and Mood Enhancement

The emotional and mood enhancement scale was adopted from Dittmar, Long, and Bond (2007), and consisted of eight items (e.g., “I often buy things because it puts me a better mood”). The scale revealed acceptable reliability and validity in Dittmar et al.’s (2007) online shopping study. The participants were asked to indicate their responses based on a 7-point Likert-type scale where 1 = “disagree completely” and 7 = “agree completely.”

Demographic Information

Demographic information was measured in terms of participants' following demographical features: 1) gender, 2) age, 3) major, 4) ethnicity, 5) year at school, and 6) monthly allowance. Data related to gender, ethnicity, and year at school was nominal (categorical) data. Data related to age was ratio data. Data related to monthly allowance was ordinal data.

Table 4
Summary of Key Measures

Construct (No. of Items)	Item Description	Source(s)
Participants' Characteristics in Virtual Communities		
Online consumer conformity (12 items)	<p>I often consult others in the virtual community to help choose the best alternative available.</p> <p>If I want to be like someone in the virtual community, I often try to buy the same brands that they buy.</p> <p>It is important that others in the virtual community like the products and brands I buy.</p> <p>If other people can see me using a product/service, I often purchase the brand the virtual community expects me to buy.</p> <p>To make sure I buy the right product or brand, I often observe what others in the virtual community are buying and using.</p> <p>I rarely purchase the latest fashion styles until I am sure the virtual community approves of them.</p> <p>I often identify with others in the virtual community by purchasing the same brands they purchase.</p> <p>If I have little experience with a product/service, I often ask the virtual community about it.</p> <p>When buying products/services, I generally purchase those brands that I think the virtual community would approve of</p> <p>I like to know what brands and products make good impressions on the virtual community</p>	Bearden et al. (1989)

	I frequently gather information from the virtual community about a product/service before I buy.	
	I achieve a sense of belonging by purchasing the same products and brands that the virtual community purchases.	
Online community interaction (5 items)	How often do you visit online community each month?	Valck et al. (2009)
	Duration of visits	
	Retrieve information	
	Supply information	
	Discuss information	
Internet expertise level (3 items)	Expertise level (novice, intermediate & expert)	Lokken et al. (2003)
	Level of easiness to get adopted to the online group features	
	How comfortable are you in using online retail websites?	
E-Compulsive Buying Tendencies (10 items)	I often have a real desire to go online shopping and buy something.	d' Astrous et al. (1990)
	I sometimes feel that something inside pushes me to go online shopping	
	There are times when I have urges to buy online (e.g., clothes, electronic products, etc)	
	As soon as I go online, I wish go to a retail website and buy something	
	I have often bought a product online that I did not need even when I knew I had very little money left	
	There are some things I buy online that I do not show to anybody because I fear people will think I did a foolish expense or I wasted money my money	
	At times I have felt somewhat guilty after buying something online because it seems unreasonable	
	When I have money, I cannot help but spend part or the whole of it in online shopping	
	I often buy something online without planning, just because I have to have it	
	Online shopping is way of relaxing and forgetting my problems	
	I like to spend money online	
Subjective Well-Being		
Life satisfaction (5 items)	In most ways my life is close to ideal.	Diener et al. (1985)
	The condition of my life are excellent	

<p>I am satisfied with my life So far I have gotten the important things I want in life If I could live my life over, I would change almost nothing</p> <p>Positive and negative affect (10 items)</p> <p>Miserable-Enjoyable Boring-Interesting Hard-Easy Useless-Worthwhile Lonely-Friendly Empty-Full Discouraging-Hopeful Tied down-Free Disappointing-Rewarding Doesn't give me much chance-Bring out the best in me</p>	<p>Campbell et al. (1976)</p>
<p>Internet Addiction (8 items)</p> <p>I feel the need to use the Internet with increasing amount of time to achieve satisfaction? I feel preoccupied with the Internet (think about previous online activity or anticipate next online session) I have repeatedly made unsuccessful efforts to control, cut back, or stop Internet use. I feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use I stay online longer than originally intended I have jeopardized or risked the loss of a significant relationship, job, educational or career opportunity because of the Internet I have lied to family members, therapists, or others to conceal the extent of involvement with the Internet I use the Internet as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression)</p>	<p>Young (2004)</p>
<p>Self-Regulation (5 items)</p> <p>I am good at resisting temptation I have hard time breaking bad habits I wish I had more self-discipline Pleasure and fun sometimes keep me from getting work done Sometimes I can't stop myself from doing something</p>	<p>Tangney et al. (2004)</p>
<p>Emotional Enhancement and Mood Regulation (7 items)</p>	<p>Dittmar et al.</p>

I often buy things because it puts me a better mood. (2007)
Compared to other things I could do, buying consumer
goods is truly enjoyable
I get a real buzz from buying things
Buying things arouses my emotions and feelings
Shopping is fun and exciting
For me, shopping and buying things is an important
leisure
I enjoy browsing and looking at things, even I do not
intend to buy

Statistical Analysis

Data obtained in this study was entered in SPSS for statistical analysis.

Descriptive analyses (e.g., frequency, means, and modes) were performed on final data set related to demographic information. The reliability of each multi-item scale was assessed prior to subsequent analyses. A series of multiple regressions and simple regressions were employed to answer all hypotheses.

Chapter Summary

This chapter provides detailed information pertaining to research methodology (i.e., sample and procedure, questionnaire development and pretest, measures, and statistical analysis) that were employed to answer the research hypotheses addressed in the previous chapter. The following chapter presents the analysis and its results.

CHAPTER IV

RESULTS

This chapter consists of three major sections: participant characteristics, descriptive statistics, and hypotheses testing. The first section begins with an overview of participants' characteristics. Then, descriptive information about variables related to participants' characteristics in online communities (i.e., consumer conformity, participation level, and perceived Internet expertise), E-compulsive buying tendencies, subjective well-being, Internet addiction, self-regulation, and emotional and mood enhancement is presented. Finally, the chapter concludes with the results of hypotheses testing.

Participants' Characteristics

Two hundred and twenty-two participants filled out the complete survey. Since the major objective of the study was to examine the impact of virtual community participants' characteristics (e.g., conformity) on their E-compulsive buying tendencies and its consequences, those who indicated that they had never participated in any online/virtual communities or were unsure about their online/virtual participation were discarded. As a result, 30 responses were deleted, leaving the total of 192 usable responses. Of these, approximately 91% (n=175) of the participants were female and 8 % (n=15) were male. Related to ethnicity, the participants identified themselves as

Caucasians (60.4%), African-Americans (26.6%), Hispanic Americans (2.1%), Asians (6.8), and multiracial (1%). The participants represented all levels of class standing: freshmen (18.8%), sophomores (15.6%), juniors (20.3%), and seniors (44.3%). The degree majors represented among students were Consumer, Apparel, and Retail Studies (59.9%), Apparel Product Design (9.4%), Elementary Education (8.3%), Public Health (2.6%), Communication (2.1%), Biology (2.1%), and Business Administration (1.6%). The remaining (15.6 %) represented a variety of majors such as African studies, Anthropology, Asian Studies, Dance, Design, Education, English, History, Marketing, Social work, Special Education, Speech Pathology, Studio Arts, and Theater. Approximately 90% were in the traditional student age category of 17 to 25 years old. Related to monthly gross income, the majority (75%) reported their monthly gross income less than \$1,000 (see Table 5).

Table 5
Demographic Characteristics of the Participants (n=192)

Demographic Variables	Frequency	Percent (%)
Gender		
Male	15	7.8
Female	175	91.1
Age		
17-20	81	42.2
21-24	89	46.3
25-28	14	7.2
29-32	5	2.6
33 and above	1	.5
Major		
Consumer, Apparel, and Retail Studies	115	59.9

Apparel Product Design	18	9.4
Elementary Education	16	8.3
Public Health	5	2.6
Communication	4	2.1
Biology	4	2.1
Business Administration	3	1.6
Other Majors	27	15.6
Ethnicity		
White/Caucasian	116	60.4
Black/African American	51	26.6
Asian	13	6.8
Hispanic/Latino	4	2.1
Multiracial	8	4.1
Year at School		
Freshmen	36	18.8
Sophomore	30	15.6
Junior	39	20.3
Senior	85	44.3
Monthly Gross Income		
Under \$500	81	42.2
\$500 - \$749	42	21.9
\$750 - \$999	21	10.9
\$1,000 - \$1,499	18	9.4
\$1,500 - \$1,999	10	5.2
\$2,000 or more	11	5.7

Descriptive Statistics

Table 6 shows the descriptive statistics (e.g., means, medians, and standard deviations) for the variables. The means of all constructs were above the midpoint (i.e., 4.00), except for normative conformity: $M_{\text{Normative Conformity}} = 2.72$, informative conformity: $M_{\text{Informative Conformity}} = 3.43$, E-compulsive buying tendencies: $M_{\text{E-compulsive Buying Tendencies}} = 3.12$, Internet addiction: $M_{\text{Internet Addiction}} = 3.44$, and self-regulation: $M_{\text{Self-Regulation}} = 3.12$.

Regulation = 3.76 were below the midpoint. The standard deviation ranged from 1.04 ($M_{\text{Positive Effect}} = 4.99$) to 1.46 ($M_{\text{Online Compulsive Buying Tendencies}} = 3.43$), suggesting substantial variances in the responses. Of the total 222 responses, 86.5 % had virtual community experience. Hence, 30 responses (13.6%) were removed and only 192 responses were used for further analysis.

To ensure the reliability of the variables, Cronbach's alpha was calculated. Cronbach's alpha is a widely used measure for assessing the reliability of a psychometrically developed scale (Peter, 1979). In addition, Cronbach's alpha was used to examine the internal consistency of the measures. The value of the Cronbach's coefficient ranges from 0 and 1, where 0 indicates a completely unreliable measure and 1 indicates a completely reliable measure. Nunnally and Bernstein (1994) recommend that the reliability of all latent constructs should exceed the benchmark of 0.70 as an indication of acceptable measures. Table 6 shows the reliability of all measures used in the study, except virtual community experience because virtual community experience was assessed using one item. As a result, there was no reliability reported for virtual community experience. Overall, information from Table 6 indicates that all measures were reliable. The values for Cronbach's coefficients ranged from 0.94 (normative conformity) to 0.75 (self-regulation). In summary, all measures demonstrated acceptable degree of reliability.

Table 6
Descriptive Statistics of Variables

Variables	No. of Items	Mean	Median	Std.	Reliability
Characteristics of Virtual Community Participants					
Normative conformity	8	2.72	2.63	1.28	0.94
Informative conformity	4	3.43	3.50	1.35	0.84
Online Participation level	5	4.06	4.00	1.41	0.88
Perceived Internet expertise	3	5.30	5.67	1.17	0.77
E-compulsive Buying Tendencies	10	3.43	3.40	1.46	0.93
Subjective Well-Being					
Life satisfaction	5	4.84	4.90	1.13	0.88
Positive Effect	10	4.99	5.00	1.04	0.89
Internet Addiction	8	3.12	3.13	1.21	0.87
Self-Regulation	5	3.76	3.80	1.12	0.75
Emotional and Mood Enhancement	7	4.87	5.14	1.39	0.91

Hypotheses Testing

A series of multiple regressions and simple regressions were performed for testing all hypotheses. Hypothesis 1 was tested via the use of a multiple regression to examine the relationship between characteristics of online participants in virtual communities and E-compulsive buying tendencies. Hypothesis 2 was tested via the use of a series of simple regressions to examine the relationship between E-compulsive buying tendencies and their outcomes (i.e., subjective well-being and Internet addiction). Lastly, hypotheses

3 and 4 were tested via a series of multiple regression analyses to examine the linear and interaction effects on the relationship between characteristics of online participants in virtual communities and E-compulsive buying tendencies.

Hypotheses 1: Relationship between characteristics of online participants in virtual communities and E-compulsive buying tendencies

Hypothesis 1 predicted that selected characteristics of online participants in virtual communities (i.e., consumer conformity, online participation level, and perceived Internet expertise) would affect their E-compulsive buying tendencies. To test this hypothesis, a multiple regression was performed using the four characteristics of online participants in virtual communities (i.e., informative conformity, normative conformity, online participation level, and perceived Internet expertise) as independent variables and E-compulsive buying tendencies as a dependent variable.

Prior to performing a multiple regression analysis, multicollinearity was checked. The values of variance inflation (VIF) and tolerance for each variable and the tests of the extent of multicollinearity and collinearity showed no evidence of multicollinearity in the model. That is, no VIF values were greater than 10.0 (the highest VIF value is 2.70) and no values of tolerance were lower than 0.10 (Hair et al., 2011).

Results of the multiple regression analysis suggest that three characteristics of online participants in virtual communities (i.e., normative conformity, online participation level, and perceived Internet expertise) affected their E-compulsive buying tendencies, F -value = 18.03, $p < .001$. In addition, the adjusted R^2 was 0.2618, which

revealed that 26.18% of the variance in E-compulsive buying tendencies was explained by these three characteristics of online participants (see Table 7).

Results further revealed that normative conformity positively affected E-compulsive buying tendencies ($\beta = 0.57$, t -value = 5.27, $p < .001$), supporting H1b. However, results showed that informative conformity did not significantly affect E-compulsive buying tendencies ($\beta = -0.15$, t -value = -1.37, $p = 0.1727$). Thus, hypothesis H1a was not supported. In addition, results also showed that online participation level and perceived Internet expertise positively affected E-compulsive buying tendencies ($\beta = 0.17$, t -value = 2.14, $p < .05$; $\beta = 0.19$, t -value = 2.24, $p < .05$; respectively). Thus, H1c and H1d were supported (see Table 7).

Table 7
Multiple Regression Results of Online Participants' Characteristics and E-Compulsive Buying Tendencies

	E-Compulsive Buying Tendencies		
	Beta (β) Coefficient ^a	t-value	p-value
Consumer Conformity			
Informative Conformity	-0.151	-1.37	0.1727
Normative Conformity	0.571	5.27	< .001
Online Participation Level	0.173	2.14	0.0337
Perceived Internet Expertise	0.191	2.24	0.0261
		Adjusted $R^2 = .2618$	
		$R^2 = .2772$	
		$F_{(4, 188)} = 18.03$, $p < .001$	

a: standardized beta coefficients

Hypotheses 2: Relationship between E-compulsive buying tendencies and subjective well-being and Internet addiction

Hypothesis 2 proposed that E-Compulsive buying tendencies would have an impact on subjective well-being and Internet addiction. To test hypothesis 2, a series of simple regressions were performed independently using E-compulsive buying tendencies as an independent variable and two dimensions of subjective well-being (life satisfaction and positive affect) as well as Internet addiction as dependent variables.

In examining hypothesis 2a, a relationship between E-compulsive buying tendencies and subjective well-being, results of a simple regression analysis revealed that E-compulsive buying tendencies did not significantly affect subjective well-being in terms of life satisfaction (F -value = 1.25, p = 0.2651; β = -0.06, t -value = -1.12, p = 0.2651) and positive affect (F -value = 0.06, p = 0.8048; β = -0.01, t -value = -0.25, p = 0.8048). In addition, the values of adjusted R^2 of these two separate simple regression models were very small (0.0013 and -0.0049, respectively) (see Table 8). These results suggested that E-compulsive buying tendencies did not explain much variance in predicting life satisfaction and positive affect. Therefore, H2a was not supported.

Table 8
Simple Regression Results of E-Compulsive Buying Tendencies and Subjective Well-Being (Life Satisfaction and Positive Affect)

	Subjective Well-Being					
	Life Satisfaction			Positive Affect		
	B	t-value	p-value	β	t-value	p-value
E-Compulsive Buying Tendencies	-0.06	-1.12	0.2651	-0.01	-0.25	0.8048

Adjusted $R^2 = .0013$	Adjusted $R^2 = -.0049$
$R^2 = .0065$	$R^2 = .0003$
$F_{(1, 190)} = 1.25, p = 0.2651$	$F_{(1, 191)} = 0.06, p = 0.8048$

In examining hypotheses 2b, a relationship between E-compulsive buying tendencies and Internet addiction, results of a simple regression analysis revealed that E-compulsive buying tendencies significantly affected Internet addiction (F -value = 69.11, $p < .001$; $\beta = 0.43$, t -value = 8.31, $p < .001$). In addition, the adjusted R^2 was 0.2619, which revealed that 26.19% of the variance in Internet addiction was explained by E-compulsive buying tendencies (see Table 9). Therefore, H2b was supported.

Table 9
Simple Regression Results of E-Compulsive Buying Tendencies and Internet Addiction

	Internet Addiction		
	Beta (β) Coefficient ^a	t-value	p-value
E-Compulsive Buying Tendencies	0.43	8.31	< .001
		Adjusted $R^2 = .2619$	
		$R^2 = .2657$	
		$F_{(1, 191)} = 69.11, p < .001$	

Hypotheses 3: Moderating role of self-regulation on relationship between characteristics of online participants in virtual communities and E-compulsive buying tendencies

Hypothesis 3 proposed that the relationship between characteristics of virtual community participants (i.e., informative conformity, normative conformity, online participation level, and perceived Internet expertise) and their E-compulsive buying

tendencies would be weaker among those who displayed a high degree of self-regulation as compared to those who displayed a low degree of self-regulation. Prior to testing this particular hypothesis, the mean score for self-regulation was calculated. Results revealed a mean score for self-regulation of 3.76 with a standard deviation of 1.12. Employing the median split technique, the mean score was later used to divide the participants into two groups: low (mean < 3.76) and high (mean \geq 3.76) degree of self-regulation.

To examine hypothesis 3, two multiple regression analyses were conducted independently (low vs. high degree of self-regulation groups) using characteristics of virtual community participants as independent variables and their E-compulsive buying tendencies as a dependent variable. Results revealed that, for the low degree of self-regulation group, one characteristic of online participants in virtual communities (i.e., normative conformity) affected their E-compulsive buying tendencies, F -value = 6.21, $p < .001$. In addition, the adjusted R^2 was 0.1879, which revealed that 18.79% of the variance in E-compulsive buying tendencies was explained by only one characteristic of online participants. Related to the high degree of self-regulation group, all four characteristics of online participants in virtual communities (i.e., informative conformity, normative conformity, online participation level, and perceived Internet expertise) affected their E-compulsive buying tendencies, F -value = 16.23, $p < .001$. In addition, the adjusted R^2 was 0.3762, which revealed that 37.62% of the variance in E-compulsive buying tendencies was explained by these four characteristics of online participants (see Table 10).

Results further revealed that, while informative conformity negatively affected E-compulsive buying tendencies ($\beta = -0.28$, t -value = -2.20 , $p < .05$) among those with a high degree of self-regulation, informative conformity did not significantly affect E-compulsive buying tendencies among those with a low degree of self-regulation ($\beta = -0.03$, t -value = -0.19 , $p = 0.8530$). This result implies that informative conformity exerted stronger influence on E-compulsive buying tendencies among those with a high degree of self-regulation as compared to those with a low degree of self-regulation in a negative way. Thus, H3a was supported.

When examining the impact of normative conformity on E-compulsive buying tendencies, results further showed that normative conformity positively affected E-compulsive buying tendencies on both low and high degree of self-regulation groups (low: $\beta = 0.55$, t -value = 3.08 , $p < .01$; high: $\beta = 0.64$, t -value = 5.28 , $p < .001$) (see Table 10). However, the beta coefficient values of the high self-regulation group were higher than those of the low self-regulation group ($\beta_{\text{High}} = 0.64$ vs. $\beta_{\text{Low}} = 0.55$). This result seems to imply that normative conformity exerted a stronger influence on E-compulsive buying tendencies among those with a high degree of self-regulation as compared to those with a low degree of self-regulation. Thus, H3b was not supported.

In addition, results also showed that, while online participation level positively affected E-compulsive buying tendencies ($\beta = 0.24$, t -value = 2.67 , $p < .01$) among those with high degree of self-regulation, online participation level did not significantly affect E-compulsive buying tendencies among those with low degree of self-regulation ($\beta = 0.09$, t -value = 0.67 , $p = 0.5063$). This result also seems to imply that online participation

level exerted a stronger influence on E-compulsive buying tendencies among those with a high degree of self-regulation as compared to those with a low degree of self-regulation. Thus, H3c was not supported. Likewise, results further showed that, while perceived Internet expertise positively affected E-compulsive buying tendencies ($\beta = 0.24$, t -value = 2.65, $p < .01$) among those with high degree of self-regulation, perceived Internet expertise did not significantly affect E-compulsive buying tendencies among those with a low degree of self-regulation ($\beta = 0.06$, t -value = 0.40, $p = 0.6902$) (see Table 10). Again, this may suggest that perceived Internet expertise exerted stronger influence on E-compulsive buying tendencies among those with a high degree of self-regulation as compared to those with a low degree of self-regulation. Thus, H3d was also not supported.

Table 10
Multiple Regression Results of Online Participants' Characteristics and E-Compulsive Buying Tendencies by the Degree of Self-Regulation

Independent Variables	E-Compulsive Buying Tendencies					
	Low Degree of Self-Regulation			High Degree of Self-Regulation		
	B	t-value	p-value	β	t-value	p-value
Consumer Conformity						
Informative conformity	-0.03	-.019	0.8530	-0.28	-2.20	0.0300
Normative conformity	0.55	3.08	0.0027	0.64	5.28	< .001
Online Participation Level	0.09	0.67	0.5063	0.24	2.67	0.0088
Perceived Internet Expertise	0.06	0.40	0.6902	0.24	2.65	0.0094
	Adjusted $R^2 = .1879$ $R^2 = .2240$ $F_{(4, 86)} = 6.21, p < .001$			Adjusted $R^2 = .3762$ $R^2 = .4009$ $F_{(4, 97)} = 16.23, p < .001$		

Hypotheses 4: Moderating role of emotional and mood enhancement on relationship between characteristics of online participants in virtual communities and E-compulsive buying tendencies

Hypothesis 4 predicted that the relationship between characteristics (i.e., informative conformity, normative conformity, online participation level, and perceived Internet expertise) of virtual community participants and their E-compulsive buying tendencies would be stronger among those who displayed a high degree of emotional and mood enhancement as compared to those who displayed a low degree of emotional and mood enhancement. Prior to testing this particular hypothesis, the mean score for emotional and mood enhancement was calculated. Results revealed a mean score for emotional and mood enhancement of 4.87 with a standard deviation of 1.39. Employing the median split technique, the mean score was later used to divide the participants into two groups: low (means < 4.87) and high (mean ≥ 4.87) degree of emotional and mood enhancement.

To examine hypothesis 4, two multiple regression analyses were carried out independently (low vs. high degree of emotional and mood enhancement groups) using characteristics of virtual community participants as independent variables and E-compulsive buying tendencies as a dependent variable. Results revealed that, for the low degree of emotional and mood enhancement group, two characteristics (i.e., normative conformity and perceived Internet expertise) of online participants in virtual communities affected their E-compulsive buying tendencies, F -value = 18.59, $p < .001$. In addition, the adjusted R^2 was 0.4415, which revealed that 44.15% of the variance in E-compulsive

buying tendencies was explained by these two characteristics of online participants. Related to the high degree of emotional and mood enhancement group, two characteristics (i.e., normative conformity and online participation level) of online participants in virtual communities affected their E-compulsive buying tendencies, F -value = 4.10, $p < .05$. In addition, the adjusted R^2 was 0.1358, which revealed that 13.58% of the variance in E-compulsive buying tendencies was explained by these two characteristics of online participants (see Table 11).

Results further revealed that informative conformity did not significantly affect E-compulsive buying tendencies for low or high degree of emotional and mood enhancement groups (low: $\beta = -0.11$, t -value = -0.87 , $p = 0.3849$; high: $\beta = -0.25$, t -value = -1.61 , $p = 0.1101$). Therefore, H4a was not supported. When examining the impact of normative conformity on E-compulsive buying tendencies, results further showed that normative conformity positively affected E-compulsive buying tendencies on both low and high degree of emotional and mood enhancement groups (low: $\beta = 0.72$, t -value = 5.96 , $p < .001$; high: $\beta = 0.42$, t -value = 2.80 , $p < .01$). However, the beta coefficient values of the low emotional and mood enhancement group were higher than those of the high emotional and mood enhancement group ($\beta_{\text{Low}} = 0.72$ vs. $\beta_{\text{High}} = 0.42$). This data/finding seems to imply that normative conformity exerted a stronger influence on E-compulsive buying tendencies among those with a low degree of emotional and mood enhancement as compared to those with a high degree of emotional and mood enhancement. Thus, H4b was also not supported.

In addition, results showed that, while online participation level positively affected E-compulsive buying tendencies ($\beta = 0.24$, t -value = 2.11, $p < .05$) among those with a high degree of emotional and mood enhancement, online participation level did not significantly affect E-compulsive buying tendencies among those with a low degree of emotional and mood enhancement ($\beta = 0.04$, t -value = 0.39, $p = 0.6958$) (see Table 11). This result may suggest that online participation level exerted stronger influence on E-compulsive buying tendencies among those with a high degree of emotional and mood enhancement as compared to those with a low degree of emotional and mood enhancement. Thus, H4c was supported. Lastly, results further showed that, while perceived Internet expertise positively affected E-compulsive buying tendencies ($\beta = 0.24$, t -value = 2.73, $p < .01$) among those with low degree of emotional and mood enhancement, perceived Internet expertise did not significantly affect E-compulsive buying tendencies among those with high degree of emotional and mood enhancement ($\beta = 0.025$, t -value = 0.18, $p = 0.8540$) (see Table 11). This result tends to imply that perceived Internet expertise exerted a stronger influence on E-compulsive buying tendencies among those with a low degree of emotional and mood enhancement as compared to those with a high degree of emotional and mood enhancement. Thus, H4d was not supported.

Table 11
Multiple Regression Results of Online Participants' Characteristics and E-Compulsive Buying Tendencies by the Degree of Emotional and Mood Enhancement

Independent Variables	E-Compulsive Buying Tendencies					
	Low Degree of Emotional and Mood Enhancement			High Degree of Emotional and Mood Enhancement		
	β	t-value	p-value	β	t-value	p-value
Consumer Conformity						
Informative conformity	-0.11	-0.87	0.3849	-0.25	-1.61	0.1101
Normative conformity	0.72	5.96	< .001	0.42	2.80	0.0061
Online Participation Level	0.04	0.39	0.6958	0.24	2.11	0.0377
Perceived Internet Expertise	0.24	2.73	0.0076	0.025	0.18	0.8540
	Adjusted $R^2 = .4415$ $R^2 = .4666$ $F_{(4, 85)} = 18.59, p < .001$			Adjusted $R^2 = .1358$ $R^2 = .1434$ $F_{(4, 98)} = 4.10, p < .01$		

The results of all hypotheses testing are summarized in Table 12.

Table 12
Summary of the Results of Hypotheses

	Hypothesis	Results
H1a	The characteristics of virtual community participants related to informative conformity will affect their E-compulsive buying tendencies.	Not supported
H1b	The characteristics of virtual community participants related to normative conformity will affect their E-compulsive buying tendencies.	Supported
H1c	The characteristics of virtual community participants related to participation level will affect their E-compulsive buying tendencies.	Supported
H1d	The characteristics of virtual community participants	Supported

related to Internet expertise will affect their E-compulsive buying tendencies.

H2a	The participants' E-compulsive buying tendencies will affect their subjective well-being.	Not supported
H2b	The participants' E-compulsive buying tendencies will positively affect their level of Internet addiction.	Supported
H3a	Self-regulation will moderate the relationship between characteristics of virtual community participants related to informative conformity and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to informative conformity will affect their E-compulsive buying tendency less strongly when they display a high degree of self-regulation as compared to when they display a low degree of self-regulation.	Supported
H3b	Self-regulation will moderate the relationship between characteristics of virtual community participants related to normative conformity and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to normative conformity will affect their E-compulsive buying tendency less strongly when they display a high degree of self-regulation as compared to when they display a low degree of self-regulation.	Not Supported
H3c	Self-regulation will moderate the relationship between characteristics of virtual community participants related to participation level and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to participation level will affect their E-compulsive buying tendency less strongly when they display a high degree of self-regulation as compared to when they display a low degree of self-regulation.	Not Supported
H3d	Self-regulation will moderate the relationship between characteristics of virtual community participants related to Internet expertise and their E-compulsive buying tendencies. That is, the characteristics of virtual	Not Supported

community participants related to Internet expertise level will affect their E-compulsive buying tendency less strongly when they display a high degree of self-regulation as compared to when they display a low degree of self-regulation.

- | | | |
|-----|--|---------------|
| H4a | Emotional and mood enhancement will moderate the relationship between characteristics of virtual community participants related to informative conformity and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to informative conformity will affect their E-compulsive buying tendency more strongly when they display a high degree of emotional and mood enhancement motives as compared to when they display a low degree of emotional and mood enhancement motives. | Not Supported |
| H4b | Emotional and mood enhancement will moderate the relationship between characteristics of virtual community participants related to normative conformity and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to normative conformity will affect their E-compulsive buying tendency more strongly when they display a high degree of emotional and mood enhancement motives as compared to when they display a low degree of emotional and mood enhancement motives. | Not Supported |
| H4c | Emotional and mood enhancement will moderate the relationship between characteristics of virtual community participants related to participation level and their E-compulsive buying tendencies. That is, the characteristics of virtual community participants related to participation level will affect their E-compulsive buying tendency more strongly when they display a high degree of emotional and mood enhancement motives as compared to when they display a low degree of emotional and mood enhancement motives. | Supported |
| H4d | Emotional and mood enhancement will moderate the relationship between characteristics of virtual | Not Supported |

community participants related to Internet expertise and their E-compulsive buying tendencies. That is, the characteristic of virtual community participants related to Internet expertise level will affect their E-compulsive buying tendency more strongly when they display a high degree of emotional and mood enhancement motives as compared to when they display a low degree of emotional and mood enhancement motives.

Chapter Summary

This chapter presents statistical findings related to the hypotheses addressed in Chapter 2. In the next chapter, a discussion of conclusions related to these findings is addressed. Implications are provided. It is then concluded with limitations and future research directions.

CHAPTER V

DISCUSSION AND CONCLUSIONS

The central purpose of the current study was to develop and empirically examine the conceptual model of E-compulsive buying tendencies within the context of understanding its antecedents and consequences. Specifically, the study was guided by three specific objectives. The first objective is to assess the effects of selected characteristics of virtual community participants (i.e., normative conformity, informative conformity, online participation level, and perceived Internet expertise) on their E-compulsive buying tendencies. The second objective is to examine the impact of E-compulsive buying tendencies on subjective well-being and Internet addiction. The last objective is to investigate the moderating effect of psychological factors (i.e., self-regulation and emotional and mood enhancement) on the relationships between selected characteristics of virtual community participants and their E-compulsive buying tendencies. All hypotheses have been examined and results have been reported in the previous chapter.

This chapter presents a discussion of major findings, followed by the study's conclusion. Next, the theoretical and managerial implications are offered. Finally, the limitations and future research consideration are addressed.

Discussion of Major Findings

Three specific research objectives were employed to guide the current study. The first objective was to assess the effects of selected characteristics of virtual community participants (i.e., normative conformity, informative conformity, online participation level, and perceived Internet expertise) on their E-compulsive buying tendencies. Hypothesis 1 was employed to assess the first research objective. The second objective was to investigate the effects of E-compulsive buying tendencies on subjective well-being and Internet addiction. Hypothesis 2 was used to assess this specific objective. Finally, the third objective was to examine the effects of the moderators (i.e., self-regulation and emotional and mood enhancement) on the relationships between selected characteristics of virtual community participants and their E-compulsive buying tendencies. Hypotheses 3 and 4 were utilized to assess the last research objective.

Objective 1: Effects of selected characteristics of virtual community participants on their E-compulsive buying tendencies

Four selected characteristics of virtual community participants (i.e., informative conformity, normative conformity, online participation level, perceived Internet expertise) were examined to study its impact on E-compulsive buying tendencies. When examining the effects of consumer conformity on E-compulsive buying tendencies, the study's results are somewhat similar to the previous study in that normative conformity positively affected E-compulsive buying tendencies (Kozinets, 2002). That is, virtual

community participants who have the tendency to feel obligated to respond to others' concerns about their product choice and usage are likely to display online compulsive shopping tendencies. However, the study's result is contradictory to Lee and Park (2008), who reported a negative relationship between normative conformity and E-compulsive buying tendencies. This may be that items employed to assess E-compulsive buying tendencies are different from one used in Lee and Park's (2008) study, which tend to reflect consumers online buying intentions. Furthermore, the study did not find the significant relationship between informative conformity and E-compulsive buying tendencies as reported in some previous studies (Kozinets, 2002; Lee & Park, 2008). This may be that informative conformity could act as a controlling characteristic instead of an influencing characteristic on consumers' E-compulsive buying tendencies.

Results further lend support to previous studies (Chen et al., 2009; Koh & Kim, 2004; Valck et al., 2009) in that a virtual community member's online participation level positively affected his/her E-compulsive buying tendencies. This may be that virtual communities offer interacting opportunities for the members and act as a virtual source for product/service information where members can have access through discussion format in the forums and blogs. According to Valck et al. (2009), with increasing interaction among members of virtual communities, these virtual community members tend to exhibit a tendency to compulsively shop online. As Chen et al. (2009) and Hagel and Armstrong (1997) noted, the amount of interaction among members in virtual community members reflects the degree of participation among the members. Therefore,

it can be said that the member's online participation level is also an influencing factor of E-compulsive buying tendencies because of its nature.

In addition, our findings also revealed that perceived Internet expertise positively influenced E-compulsive buying tendencies. This result is in line with others who have suggested that perceived Internet expertise of virtual community members might impact their compulsive buying tendencies that might occur in a cyberspace (Farquhar & Rowley, 2006; Valck et al., 2009). That is, consumers' perceived proficiency level of using Internet space such as virtual communities to perform online activities (e.g., search for product information) may act as important factor influencing them to purchase products online compulsively. Lokken et al. (2003) also asserted that consumers' skills in surfing the Internet are likely to influence their online consumption. As expected, thus, perceived Internet expertise is likely to influence E-compulsive buying tendencies.

Objective 2: Effects of consumers' E-compulsive buying tendencies on subjective well-being and Internet addiction

Compulsive buying behavior is considered as a psychological disorder (O'Guinn & Faber, 1989), which is likely to produce negative consequences. The current study predicted two possible consequences associated with E-compulsive buying tendencies, Internet addiction and subjective well-being. Researchers have reported that many Internet websites that contain interesting features may stimulate compulsive buying tendencies that may harm one's well-being and lead to abnormal behaviors (e.g., addiction, online shopaholics) (Chen et al., 2004; Greenfield, 1999; Ko & Kuo, 2009).

The study's results only supported these previous studies in that E-compulsive buying tendencies positively affected Internet addiction, indicating that participants with higher degree of online compulsive buying tendencies are likely to possess excessive use of the Internet. Such a result seems to be warranted given the nature of this interactive medium that facilitates a number of online activities.

However, other results of the current study is contradictory to previous studies that reported a relationship between E-compulsive buying tendencies and one's well-being (Chen et al., 2004; Ko & Kuo, 2004; Roberts, 2004). This may be due to the other external variables such as motivations involved with the virtual communities and the online shopping environment that may discount the direct impact of E-compulsive buying tendencies on one's well-being.

Objective 3: Effects of the moderating role of psychological factors (i.e., self-regulation, emotional and mood enhancement) on the relationship proposed in the first objective

Psychological factors such as self-regulation and emotional and mood enhancement are expected to moderate the relationships between selected characteristics of virtual community participants and their E-compulsive buying tendencies. When examining the moderating effect of self-regulation on the relationships between selected characteristics of virtual community participants and their E-compulsive buying tendencies, the study revealed that self-regulation only moderated the relationship between informative conformity and E-compulsive buying tendencies. That is, the influence of informative conformity on E-compulsive buying tendencies is weaker among

those with high degree of self-regulation as compared to those with low degree of self-regulation. Participants who possess a high degree of conscious self-control are less likely to account information obtained from others as accepted information that may interfere with their online shopping addiction behaviors. This result may be in line with some previous studies that reported that those who display deficient self-regulation are likely to be compulsive buyers (LaRose, 2001; LaRose & Eastin, 2002).

However, the other results from the current study revealed that self-regulation did not moderate the relationships between the other three selected characteristics of virtual community participants (i.e., normative conformity, online participation level, and perceived Internet expertise) and E-compulsive buying tendencies. That is, self-regulation did not play an influencing role on the relationships between the participants' characteristics related to normative conformity, online participation level, and perceived Internet expertise and E-compulsive buying tendencies. These results seem to be contradictory to previous studies that suggested that those with high level of self-conscious control tend to do a better job in controlling themselves in terms of the influence of others, frequency of their online activities, perceived Internet expertise when it comes to online shopping activities (Claes et al., 2010; Faber & O'Guinn, 1992; LaRose & Eastin, 2002; Tangney et al., 2004). However, the current study found that the higher the degree of self-regulation, the stronger the influences of normative conformity, online participation level, and perceived Internet expertise on E-compulsive buying tendencies. These results seem to suggest that the degree of self-regulation helps facilitating such relationships.

When examining the moderating effect of emotional and mood enhancement on the relationships between selected characteristics of virtual community participants (i.e., informative conformity, normative conformity, online participation level, and perceived Internet expertise) and E-compulsive buying tendencies, we found that emotional and mood enhancement only moderated the relationship between online participation level and E-compulsive buying tendencies. That is, the influence of online participation level on E-compulsive buying tendencies is stronger among those who exhibit a high degree of emotional and mood enhancement as compared to those with exhibit a low degree of emotional and mood enhancement. Participants with a high frequency of online participation, coupled with positive emotion and mood at that moment, may have resulted in a greater tendency to be online compulsive buyers. As Dittmar et al. (2007) noted, those who believe shopping brings happiness and improve their emotion are likely to be a compulsive buyer.

However, the other results from the current study revealed that emotional and mood enhancement did not moderate the relationships between other three selected characteristics of virtual community participants (i.e., informative conformity, normative conformity and perceived Internet expertise) and E-compulsive buying tendencies as hypothesized. For example, we found that the relationship between normative conformity and E-compulsive buying tendencies seems to be stronger among those with a low degree of emotional and mood enhancement as compared to those with a high degree of emotional and mood enhancement. That is, normative conformity exerted strong influence on E-compulsive buying tendencies for those with negative emotions as

compared to those with positive emotion. Likewise, we found that perceived Internet expertise exerted stronger influence on E-compulsive buying tendencies for those with negative emotion as compared to those with positive emotion. However, emotional and mood enhancement did not moderate the relationship between informative conformity and E-compulsive buying tendencies.

Conclusions

The study was designed to examine the effects of selected characteristics of virtual community participants on E-compulsive buying tendencies and the consequences in terms of one's well being and Internet addiction. This is the first empirical study to examine the characteristics of virtual community participants as an antecedent of compulsive buying tendencies and also its consequences in the context of online shopping. The study's findings enrich our understanding related to the effects of personal characteristics of virtual community participants on their online compulsive buying tendencies, which in turn generate negative consequences related to excessive Internet activities. Furthermore, the current study aids in greater understanding pertaining to the interrelationship between psychological roles of self-regulation, emotional and mood enhancement, and characteristics of virtual community participants in influencing E-compulsive buying tendencies.

Several interesting findings were revealed in the current study. First, we find normative conformity, online participation level, and perceived Internet expertise to be the major drivers of E-compulsive buying tendencies. Second, the study also reveals that

E-compulsive buying tendencies are positively related to Internet addiction. Participants in virtual communities who have the tendency to be a compulsive buyer may end up addicted to Internet usage. Last, we further find that interaction between self-regulation and informative conformity is an important mechanism for reducing the tendency of being an online compulsive buyer. In addition, interaction between mood and emotional enhancement and online participation level is also an important mechanism in the formation of E-compulsive buying tendencies.

Implications

The results of the study provide several implications for both academics and online communities' policy makers. Regarding the academic implications, the study's results contribute to the study of influencing factors of E-compulsive buying tendencies. As predicted, virtual communities influence the consumers' compulsive buying tendencies through their characteristics of those who participate in virtual communities. That is, selected characteristics of participants (i.e., normative conformity, online participation level, and perceived Internet expertise) who are involved in social networking websites, product forums, product blogs, and retail store websites may serve as a predictor of E-compulsive buying tendencies. Those who tend to conform to information available in the virtual communities are likely to engage in compulsive buying decisions. Participants in a virtual community who spend an extensive amount of time in online participation and are considered as having a high degree of Internet expertise are likely to be addicted to online shopping. That is, participants who display

excessive online shopping are likely to display other excessive types of behavior such as Internet addiction (Chen et al., 2004; Kozinets, 2002; Wang & Fesenmaier, 2004). Hence, the current study contributes supportive and new results to the existing online compulsive buying literature related to its consequences.

Current study offers several managerial implications for virtual community owners, moderators, and policy makers. That is, virtual community owners and moderators should define the purpose of the virtual communities. For example, virtual community owners should suggest to virtual community participants that these communities are to be used for information sharing related to consumer product reviews/feedbacks, and they should have control over any advertisement postings. Also, website administrators and policy makers such as product forums and social networking websites should be more cautious about new product communities established within their websites, because many marketers tend to use virtual community space and discussion forum space as a means of marketing their products to online consumers. Virtual community policy makers should observe the postings and product information shared in the communities and regulates the information shared in the virtual communities. This may be that such information has the tendency to stimulate online addictive shopping behavior. This, in turn, may influence the consumers to buy the marketers' products. Hence, virtual community policy makers and administrators should set forth the policy for marketers about the purpose of the virtual communities and inform these marketers to use it for non-benefit purposes. It is believed that strict policy related to information shared on virtual communities is necessary to prevent the harmful

consequences that may be caused by some marketing efforts. In addition, virtual communities can be used to educate the consumers about shopping behavior and its consequences. For example, virtual communities can be used as a platform to inform the consumers about compulsive buying and the consequences of engaging such behavior.

In sum, the current study can be a starting point for academics and public policy makers to initiate in setting limitations for online marketers and advertisers to exploit online consumers in exchange for their financial benefits.

Limitations and Future Research Directions

As with any study, the current study's findings must be interpreted in light of its limitations, which also point to potential directions for future research. First, the use of students as the study's sample may limit generalizability of the findings. Apart from students, virtual communities are used by the general population (e.g., full time employed consumers, retired consumers, and etc.). Therefore, it is suggested that further replication is needed by employing a non-student population for the purpose of generalization of the results. The second limitation is the demography of the current study's participants. Participants of this study are homogenous (in terms of age, income, and major). Further study may need to collect data from other cities and/or states and with a different income range. Third, future study should incorporate other factors (e.g., motivation factors) that might affect consumers' E-compulsive buying tendencies. Lastly, it is also suspected that Internet addiction might serve more as an antecedent of E-compulsive buying tendencies than as a consequence. As Lin (2009) suggested, the importance of members' intention of

using virtual communities may aid in explaining online consumption activity. Today, there are no studies that have examined the influence of virtual member's intentions of using virtual communities in their online compulsive buying tendencies. Lastly, sophisticated statistical analysis such as structural equation modeling technique may be a better tool to examine these hypothesized relationships simultaneously.

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APPENDIX A
FINAL INSTRUMENT



Dear Students:

I am a master's student majoring in Consumer Apparel Retail Studies at The University of North Carolina at Greensboro. I am conducting research to understand online consumer's compulsive buying behavior. Therefore, your input is important to my study.

You are invited to voluntarily participate in this study. Please take about 10 to 15 minutes to complete this survey. There are no right or wrong answers to the questions. Your answer will be kept confidential and anonymous. You are allowed to work at your own pace. You may stop filling out this survey at any time you feel uncomfortable. There is no risk and no benefit to you by participating in this study. By filling out this survey, you are agreeing to participate in this study.

Thank you in advance for your participation. If you have any questions, please feel free to ask the researchers. We would be glad to assist you. In addition, if you have questions concerning your rights as a research subject, you may contact the University of North Carolina at Greensboro Institutional Review Board at 1-336-256-1482.

Sincerely,

Vinod Shanmugam
Master's Student
Consumer, Apparel, & Retail Studies
University of North Carolina
Greensboro, NC 27402
Tel: 336-554-1561
Email: vkshanmu@uncg.edu

Kittichai (Tu) Watchravesringkan, Ph.D.
Assistant Professor
Consumer, Apparel, & Retail Studies
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In this survey, there are six major sections (I, II, III, IV, V, and VI). Section I involves questions concerning your well being. Section II presents questions about your virtual community experience. Section III consists of questions related to your online shopping behavior. Section IV contains questions related to your internet behavior. Section V consists of questions related to your personality and general shopping experience. Lastly, section VI consists of questions related to demographic information.

Now Please Begin!!!!

Section I: Your Well-Being

Please indicate your agreement or disagreement with the following statements.

	Strongly Disagree						Strongly Agree
	1	2	3	4	5	6	7
1. In most ways my life is close to ideal.	1	2	3	4	5	6	7
2. The condition of my life is excellent.	1	2	3	4	5	6	7
3. I am satisfied with my life.	1	2	3	4	5	6	7
4. So far I have gotten the important things I want in life.	1	2	3	4	5	6	7
5. If I could live my life over, I would change almost nothing.	1	2	3	4	5	6	7

Please rate the scales below by checking (X) in the empty space, according to how you would feel about **your life in the past three months.**

Boring	_____ : _____ : _____ : _____ : _____ : _____ : _____	Interesting
Miserable	_____ : _____ : _____ : _____ : _____ : _____ : _____	Enjoyable
Hard	_____ : _____ : _____ : _____ : _____ : _____ : _____	Easy

Useless	_____ : _____ : _____ : _____ : _____ : _____ : _____	Worthwhile
Lonely	_____ : _____ : _____ : _____ : _____ : _____ : _____	Friendly
Empty	_____ : _____ : _____ : _____ : _____ : _____ : _____	Full
Discouraging	_____ : _____ : _____ : _____ : _____ : _____ : _____	Hopeful
Tied down	_____ : _____ : _____ : _____ : _____ : _____ : _____	Free
Disappointing	_____ : _____ : _____ : _____ : _____ : _____ : _____	Rewarding
Doesn't give me much chance	_____ : _____ : _____ : _____ : _____ : _____ : _____	Bring the best out of me

Direction: Please read the following information about virtual community prior to answering questions in the following sections.

- A virtual community (online group) is a group of people who exchange words and ideas of common interests, hobbies or products in an online space.
 - Different types of virtual communities are E-Bulletin boards or message boards, product forums, blogs by individuals, chat rooms, online shopping websites and social networking groups.
 - Some examples of product related virtual communities are eopinions.com, cnet.com, amazon.com, and ebay.com.
 - Store/product fan groups in social networking websites such as facebook.com, myspace.com and twitter.com are also a part of virtual communities.
-

that they buy.

3.	It is important that others in the virtual community like the products and brands I buy.	1	2	3	4	5	6	7
4.	If other people can see me using a product/service, I often purchase the brand the virtual community expects me to buy.	1	2	3	4	5	6	7
5.	To make sure I buy the right product or brand, I often observe what others in the virtual community are buying and using.	1	2	3	4	5	6	7
6.	I rarely purchase the latest fashion styles until I am sure the virtual community approves of them.	1	2	3	4	5	6	7
7.	I often identify with others in the virtual community by purchasing the same brands they purchase.	1	2	3	4	5	6	7
8.	If I have little experience with a product/service, I often ask the virtual community about it.	1	2	3	4	5	6	7
9.	When buying products/services, I generally purchase those brands that I think the virtual community would approve of.	1	2	3	4	5	6	7
10.	I like to know what brands and products make good impressions on the virtual community.	1	2	3	4	5	6	7
11.	I frequently gather information from the virtual community about a product/service before I buy.	1	2	3	4	5	6	7
12.	I achieve a sense of belonging by purchasing the same products and brands that the virtual community purchases.	1	2	3	4	5	6	7
13.	I enjoy learning about the product/service I sought advice about from others in the virtual community	1	2	3	4	5	6	7
14.	I am knowledgeable about the product/service in general.	1	2	3	4	5	6	7

15.	I am familiar with almost all existing brands of the product/service.	1	2	3	4	5	6	7
16.	I search for the latest information on the product/service before purchasing.	1	2	3	4	5	6	7
17.	I can recognize almost all brand names of the product/service.	1	2	3	4	5	6	7
18.	I always keep myself current on the most recent developments of the product/service.	1	2	3	4	5	6	7
19.	I use my knowledge of the product/service to verify that advertising claims are in fact true.	1	2	3	4	5	6	7

For 1 through 4, please fill in the blank

	How often do you _____ in the past 3 months?						Not often at all			Very often
1.	...visit online community	1	2	3	4	5	6	7		
2.	... retrieve information about products/services from virtual community	1	2	3	4	5	6	7		
3.	... share/provide information about products/services to members of virtual community	1	2	3	4	5	6	7		
4.	... discuss information about products/services with other members of virtual community	1	2	3	4	5	6	7		
							Do not stay very long			Stay very long
5.	When you are visiting virtual community, how long you usually stay?	1	2	3	4	5	6	7		
							Novice			Expert
6.	How would you rate your internet expertise level?	1	2	3	4	5	6	7		
							Very uncomfortable			Very comfortable
7.	How comfortable are you with using online retail websites?	1	2	3	4	5	6	7		

		Very difficult					Very easy	
		1	2	3	4	5	6	7
8.	How would you rate the degree of difficulty for you to get adapted to the online group features?							

Section III: Your Online Shopping Behavior

Please indicate your agreement or disagreement with the following statements.

		Disagree completely					Agree completely	
		1	2	3	4	5	6	7
1.	I often have a real desire to go online shopping and buy something.							
2.	I sometimes feel that something inside pushes me to shop online.							
3.	There are times when I have urges to buy online (e.g., clothes, electronic products, etc.).							
4.	As soon as I go online, I wish to go to a retail website and buy something.							
5.	I have often bought a product online that I did not need even when I knew I had very little money left.							
6.	There are some things I buy online that I do not show to anybody because I fear people will think I did a foolish purchase or I wasted money.							
7.	At times I have felt somewhat guilty after buying something online because it seemed unreasonable.							
8.	When I have money, I cannot help but spend part or all of it in online shopping.							
9.	I often buy something online without planning, just because I have to have it.							
10.	Online shopping is a way of relaxing and forgetting my problems.							

Section IV: Internet Behavior

Please indicate your agreement or disagreement with the following statements.

		Disagree completely				Agree completely		
		1	2	3	4	5	6	7
1.	I feel preoccupied with the Internet (think about previous online activity or anticipate next online session).	1	2	3	4	5	6	7
2.	I feel the need to use the Internet with increasing amount of time to achieve satisfaction.	1	2	3	4	5	6	7
3.	I have repeatedly made unsuccessful efforts to control, cut back, or stop Internet use.	1	2	3	4	5	6	7
4.	I feel restless, moody, depressed, or irritable when attempting to cut down or stop Internet use.	1	2	3	4	5	6	7
5.	I stay online longer than originally intended.	1	2	3	4	5	6	7
6.	I have jeopardized or risked the loss of a significant relationship, job, educational or career opportunity because of the Internet.	1	2	3	4	5	6	7
7.	I have lied to family members, therapists, or others to conceal the extent of my involvement with the Internet.	1	2	3	4	5	6	7
8.	I use the Internet as a way of escaping from problems or of relieving a dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression).	1	2	3	4	5	6	7

Section V: Your Personality and General Shopping Experience

Please indicate your agreement or disagreement with the following statements.

		Disagree completely				Agree completely		
		1	2	3	4	5	6	7
1.	I am good at resisting temptation.	1	2	3	4	5	6	7

2.	I have a hard time breaking bad habits.	1	2	3	4	5	6	7
3.	I wish I had more self-discipline.	1	2	3	4	5	6	7
4.	Pleasure and fun sometimes keep me away from getting work done.	1	2	3	4	5	6	7
5.	Sometimes I can't stop myself from doing something.	1	2	3	4	5	6	7
6.	I often buy things because it puts me in a better mood.	1	2	3	4	5	6	7
7.	Compared to other things I could do, buying consumer goods is truly enjoyable.	1	2	3	4	5	6	7
8.	I get a real buzz from buying things.	1	2	3	4	5	6	7
9.	Buying things arouses my emotions and feelings.	1	2	3	4	5	6	7
10.	For me, shopping is fun and exciting.	1	2	3	4	5	6	7
11.	For me, shopping and buying things is an important leisure.	1	2	3	4	5	6	7
12.	I enjoy browsing and looking at things, even when I do not intend to buy.	1	2	3	4	5	6	7

Section VI: Demographic Information

1. Gender: _____ Male _____ Female
 2. Age _____
 3. Major: _____
 4. Ethnicity _____
 5. Year at school: _____ Freshmen _____ Sophomore
- _____ Junior _____ Senior

6. Your monthly gross income (including scholarships, earnings, allowances etc.):

_____ Under \$500

_____ \$500 - \$749

_____ \$750 – \$999

_____ \$1,000 – \$1,499

_____ \$1,500 - \$1,999

_____ \$2,000 or more

☺ THANK YOU VERY MUCH ☺

APPENDIX B

IRB APPROVAL



THE UNIVERSITY of NORTH CAROLINA
GREENSBORO

OFFICE OF RESEARCH COMPLIANCE
2718 Beverly Cooper Moore and Irene Mitchell Moore
Humanities and Research Administration Bldg.
PO Box 26170
Greensboro, NC 27402-6170
336.256.1482
Web site: www.uncg.edu/orc
Federalwide Assurance (FWA) #216

To: Kittichai Watchravesringkan
Cons, Apparel, and Ret Stds
202 Stone Building

From: ~~UNCG IRB~~

Authorized signature on behalf of IRB

Approval Date: 2/03/2011

Expiration Date of Approval: 2/02/2012

RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)

Submission Type: Initial

Expedited Category: 7.Surveys/interviews/focus groups

Study #: 11-0023

Study Title: Antecedents and Consequences of Online Compulsive Shopping: The Moderating Role of Psychological Factors

This submission has been approved by the IRB for the period indicated. It has been determined that the risk involved in this research is no more than minimal.

Study Description:

The purpose of this study is to develop and empirically test the conceptual model of online compulsive behaviors within the context of understanding its antecedents and consequences.

Investigator's Responsibilities

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.

When applicable, enclosed are stamped copies of approved consent documents and other recruitment materials. You must copy the stamped consent forms for use with subjects unless you have approval to do otherwise.

You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented (use the modification application available at <http://www.uncg.edu/orc/irb.htm>). Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be reported immediately to the IRB using the "Unanticipated Problem/Event" form at the same website.

CC: Vinod Shanmugam, International Program Center, Chris Farrior, (ORED), Non-IRB Review Contact, (ORC), Non-IRB Review Contact

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

Project Title: Antecedents and consequences of online compulsive shopping: The moderating role of psychological factors

Project Director: Dr. Kittichai (Tu) Watchravesringkan

Participant's Name: _____

What is the study about?

This research provides a better understanding of the influence of participants' characteristics in virtual communities on their online compulsive behavior, which in turn may have an effect on their subjective well-being and internet dependency.

Why are you asking me?

You are eligible to participate in this study because you are at least 18 years old, read and speak English, and are likely to purchase apparel products.

What will you ask me to do if I agree to be in the study?

If you agree to participate, your participation will involve reading a brief introduction about the virtual community. Then, you will be asked to fill out a survey pertaining to your characteristics related to virtual communities, online compulsive shopping behaviors, subjective-well-being and internet dependency. It will take 15-20 minutes to complete this study. There are no right or wrong answers to the questions. You are allowed to work at your own pace. You may choose not to answer some or all of the questions. You may stop filling out this survey at any time if you feel uncomfortable.

Is there any audio/video recording?

No

What are the dangers to me?

There are no anticipated risks from participating in this research. The Institutional Review Board at University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants.

If you have any concerns about your rights or how you are being treated please contact Mr. Eric Allen in the Office of Research Compliance at UNCG at (336) 256-1482. Questions about this project or benefits or risks associated with being in this study can be answered by Kittichai (Tu) Watchravesringkan by calling 336-256-2474 or sending an email at k_watchr@uncg.edu.

Are there any benefits to me for taking part in this research study?

There are no direct benefits to participants in this study.

UNCG IRB
Approved Consent Form

Valid 2/3/11 to 2/2/12

Are there any benefits to society as a result of me taking part in this research?

This research benefits society by helping us to understand the impact of participants' characteristics in virtual communities on their online compulsive shopping behavior, which in turn affects their subjective well-being and internet dependency. That could help academic and public policy makers to better educate online consumers about the potential consequences of online activities involvement.

Will I get paid for being in the study? Will it cost me anything?

There are no costs to you or payments made for participating in this study.

How will you keep my information confidential?

Only principal investigator and the student researcher will have access to information you provided. In order to maintain your confidentiality, neither your name nor address will be asked. Your answers will be kept confidential. Questionnaires will be assigned an id number so that all participants remain confidential. No link will be made between participant's names and their survey answers. The research data will be kept for 3 years in a locked filing cabinet in a locked private office on UNC-Greensboro campus, after which all documents will be shredded and computer files will be deleted. All information obtained in this study is strictly confidential unless disclosure is required by law.

What if I want to leave the study?

You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identifiable state.

Voluntary Consent by Participant:

By signing this consent form you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing consent to take part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are 18 years of age or older and are agreeing to participate, or have the individual specified above as a participant participate, in this study described to you by Vinod Shanmugam.

Signature: _____ Date: _____

UNCG IRB
Approved Consent Form
Valid 2/3/11 to 2/2/12