CHAPTER ONE
INTRODUCTION

Due to rapid change in technology and growth in leisure time, the consumption pattern has changed radically during last century (Dittmar, Beattie, & Friese, 1996). Buying and consuming activities to satisfy the physical needs of oneself and family have shifted towards leisure activities. Factors such as time pressures, increased mobility, a rise in number of working women, and greater discretionary income cause consumers to reduce time and effort in planning what to buy (Cobb & Hoyer, 1986; Williams & Dardis, 1972) and lead them to have multiple shopping motives other than just buying a product in need. Tauber (1972) suggested that consumers have multiple shopping motives, either personal or social; for example, one may go shopping when he or she has a need for attention, for being with peers, for gaining information about trends and product innovations, or for fun. During this process, the consumer may encounter a product that he wants very much and has to purchase. According to Rook (1987), this phenomenon is called impulse buying and it represents an important form of consumer behavior.

Many study showed high rates of impulse buyers. National surveys between 1975 and 1992 found that an average of 38% of the adults were impulse buyers (DDB Needham Annual Lifestyle Survey, 1974-1993). The studies between 1999 and 2002 showed that 50% or more of participants were classified as impulse buyers (Chen-Yu & Seock, 2002; Nichols, Li, Roslow, Kranendonk, & Mandakovic, 2001; Underhill, 1999). Chen-Yu and Seock examined adolescents' impulse buying behavior and reported that about half of the participants were impulse shoppers and half were non-impulse shoppers. Nichols et al. (2001) found over 50% of mall shoppers buying items on impulse and Underhill (1999) found 70% of all grocery items being purchased on impulse.

Impulse buying has been of theoretical and practical significance to economics, consumer behavior, and psychology (Dittmar et al., 1996), but has been mostly linked with being bad and with negative consequences for personal finance, post-purchase satisfaction, social reactions, and

overall self-esteem (Rook, 1987; Rook & Hoch, 1985). Some economists analyzed psychological conflict that arises from consumers' choices between saving and impulsive spending and found that the benefits of the desired object at the point of purchase outweigh the future problem of paying the bill for impulse buyers (Thaler & Shefrin, 1981; Strotz, 1956; Winston, 1980). However, these preferences often switch later, when the buyer has to pay the bill, and therefore, regrets the purchase. Psychologists such as Kipnis (1971) and Winshie (1977) argued that because impulsiveness encourages action without consideration of the objective environment, and with little regard for possible consequences, it represents a defect of repression that may lead to serious psychological problems. However, many other researchers suggested that impulse buying also could be viewed as normatively neutral or positively approved behavior. For example, Rook and Fisher (1995) found that when a consumer suddenly decided to buy a special offer from a store that eventually would save money or when he or she spontaneously decided to buy a present for a friend who was ill, impulse buying could be motivated normatively and resulted in a positive evaluation after the behavior. Hausman (2000) also indicated that impulse buying is not always viewed negatively by consumers, but represents a rational alternative to a more time-consuming search behavior as well as a behavior that satisfies variety of non-economic reasons, such as fun, fantasy, and social or emotional needs. Many researchers suggested that consumers' impulse buying behaviors are related to their desire to satisfy hedonic needs such as enjoyment, freedom, diversion, increased arousal, and escapism from routine life (Hirschman, 1992; Holbrook & Hirschman, 1982; Kim, 2003; Tauber, 1972). The results of the studies by Cobb and Hoyer (1986) and Rook (1987) supported the argument that impulse buying satisfies hedonic needs, showing that consumers felt energized or uplifted after impulse shopping.

Many marketers allegedly use impulse buying as a criterion for decision making about merchandise location, space allocation and differential promotion strategies to increase sales (Kollat & Willett, 1969). In addition to increase sales, understanding consumers' impulse buying behavior can also benefit marketers in identifying market segmentation and increasing consumer satisfaction. Identification of consumers who conduct impulse buying helps marketers to understand who the impulse buyers are. As Rook and Hoch (1985) stated, it is people, not products, who experience consuming impulses. It is not sufficient to study buying behavior patterns without knowing whose buying behavior is involved. Therefore, it is necessary to identify the composition and origins of impulse buyers. For example, identifying impulse buyers

and their characteristics can be used for behavioral segmentation suggested by Kotler (2000). Behavioral segmentation is the process of dividing a market into groups of similar consumers on the basis of their knowledge of, attitude toward, use of, or response to a product. When impulse buyers' specific purchase goals and purchase behaviors are identified, effective marketing strategies such as product, promotion, and pricing strategies can be developed to satisfy their specific needs and increase their satisfaction.

In addition to the benefit for marketers, understanding impulse buying behavior with apparel products can also help parents gain insights in children's buying behavior, and hence, provide better suggestions to guide their impulsiveness into normatively positive behavior. For example, if parents could understand why their children conduct impulse buying and what the psychological reasons for this behavior are, they might be able to find a better way to communicate with their children about purchase behavior, suggest different approaches to fulfill psychological needs, or provide purchase skills to control impulsiveness and allocate budget to buy products wisely.

Despite the importance and prevalence of research on impulse buying behavior, many impulse buying studies were focused on which category of products could be classified as impulse items (Bellenger et al., 1978; Prasad, 1975; West, 1951) and which demographical factors might influence impulse buying (Bellenger et al., 1978; Kollat & Willet, 1967; Prasad, 1975). It was not until recently that researchers started to focus on models, precursors, and theories to be applied on impulse buying. Beatty and Ferrell (1998) proposed the impulse buying model by considering both situational and individual variables that influence impulse buying behavior. The situational variables include time availability and money availability, and the individual variables include shopping enjoyment and impulse buying tendency. The authors conducted a study to examine their proposition and found that all four variables were precursors of impulse buying. Dittmar et al. (1996) combined the social construction model of material possessions (Dittmar, 1992) and the symbolic self-completion theory (Wicklund & Gollwitzer, 1982) to propose a theoretical model focusing on psychological aspect of impulse buying. The authors used the symbolic self-completion theory to explain why and how consumers decide to buy a product on impulse. They hypothesized that an individual who experiences a discrepancy between his or her ideal and actual self will be motivated to purchase goods, particularly those that can enhance ideal self-image, on impulse. Because an apparel product is one of the products

that enhance one's image, when a consumer encounters an apparel product that enhances one's image, he or she is more likely to feel an urge to buy the product on impulse.

In the clothing and textiles area, there are only a few studies related to impulse buying. Han, Morgan, Kotsiopulos, and Kang-Park (1991) conducted a study on apparel impulse buying behavior of three groups, which were textiles and clothing students, non-textiles and clothing students, and non-student groups. Piron (1993) compared emotional reactions experienced by planned, unplanned and impulse purchases on clothing items. Chen-Yu and Seock (2002) compared impulse and non-impulse adolescent shoppers of clothing purchase motivation, information sources, and store selection criteria. Although previous studies compared apparel impulse buying behavior between different consumers, no conceptual models or theories were developed to explain the factors that are related to impulse buying.

Yurchisin and Johnson (2004) suggested that consumers who believe that apparel products have high symbolic value and high ability to communicate messages about the individual's identity (e.g., personality, social status) would be highly involved with apparel products. Because they use apparel products as a communicative and symbolic self-completion tool, apparel products play a crucial role in their lives, and therefore, they are more likely to do compulsive buying for apparel products. This study provides a possible explanation why some consumers will buy apparel products compulsively. Although Yurchisin and Johnson examined the relationship between 'compulsive' buying and apparel involvement, there is no study on the relationship between 'impulse' buying and apparel involvement. According to Edwards (1992), impulsive buying and compulsive buying are different behaviors. Impulse buyers occasionally make unplanned, impulsive purchases, often in an effort to improve their mood, whereas compulsive buyers frequently purchase items to relieve stress of anxiety and often feel guilty after purchasing items that they do not need, and often suffer from negative emotional and economic consequences as a result of their buying behavior. To understand consumers' impulsive buying behavior for apparel products, the examination of the relationship between impulse buying and apparel involvement is needed.

Another prevalent phenomenon in clothing and textiles area is the growth in consumer shopping using direct marketing (Engel, Blackwell, & Miniard, 1993). Among direct marketing, Internet shopping is growing faster than traditional stores and has evolved as a popular shopping trend (McKinney, 2004). E-commerce sales in the United States (U.S.) grew 25.4% from the first

quarter of 2005 to the first quarter of 2006 and the total amount of e-commerce sales in the first quarter of 2006 was $25.2 billion (U.S. Bureau of Census, 2006). According to the *Internet Retailer* magazine ("Strategies for multi-channel retailing," 2005), about one fourth of the top 400 online retailers are apparel retailers, and online apparel retail sales account for 9.2% of total online retail sales. Because of the rapid growth, website development in Internet shopping have gained much attention from the media as well as researchers.

Swaminathan, Lepkowska-White, and Rao (1999) mentioned that consumers evaluate websites when they make purchase decisions, and Turban, Lee, and Chung (2000) and White and Manning (1997) suggested that online shopping experiences at certain websites help form consumers' attitudes toward the sites and the possibility of future purchases from them. Therefore, website attributes play an important role in determining transactions through a website. Although numerous studies have been conducted in relation to website attributes, most of the literature on Internet shoppers only focused on the comparison of demographic, psychographic, and behavioral characteristics between shoppers and non-shoppers (McKinney, 2004). There is no study on the examination of whether certain apparel website attributes will trigger impulse buying behavior. Mischel and Grusec (1967) found that impulsive people tended to make a decision to get an inferior reward rather than wait for a superior reward when the object of the reward was placed in front of them and the visible presence of a reward caused people to be less willing to delay. In the case of Internet shopping, Then and Delong (1999) stated that product presentation with different angles and picture enlargement in Internet shopping can create a pleasurable shopping experience. These arguments suggest that certain website attributes may trigger impulse buying behavior when shopping apparel products online.

Consistent with the growth of Internet shopping, young consumers between the ages of 16 and 22 are becoming the hottest market on the Internet (Silverman, 2000). They spend more time and disposable income for Internet shopping than adults, and clothing is the most popular product category for them to shop online (Forrest Research Inc., 2001; Silverman, 2000). The research conducted by Forrest Research Inc. showed that 29% of young consumers purchased apparel products via the internet, with the average spending of $400 per year. This amount has potential to be increased in the future because the young consumers' buying power is increasing rapidly (Shim & Koh, 1997), and many young consumers are now actively participating in shopping for themselves and their families (Kim, 1993; Stipp, 1993). As more young consumers

use Internet shopping, there is a growing need to understand young consumers' online apparel shopping behavior, and therefore, this study focuses on the examination of the relationship of apparel website attributes and impulse buying behavior of young college students between the ages of 18 and 22.

Purpose of the Study

Considering the high competition in the U.S. apparel market with the increasing number of websites and young consumers' frequent use of Internet shopping (Seock, 2003), a study on young consumers' Internet shopping behavior is important. In addition, researchers recognized that impulse buying is a pervasive aspect of consumer behavior and an important strategy for marketing plans (Rook, 1987). Therefore, it is important to understand the factors that are related to consumers' impulse buying behavior. The purpose of this study was to examine the relationships between online apparel impulse buying behavior and apparel involvement, apparel website attributes, and product category/price. The results of this study may benefit current and potential Internet apparel retailers that target young consumers by providing suggestions to assist retailers to develop a website which offers pleasurable shopping experience and encourages impulse buying. Besides the possible contribution to practitioners, this study may also benefit the researchers in the apparel consumer behavior area by providing a possible explanation for why consumers conduct impulse buying and what the psychological reasons for this behavior are.

Conceptual Definitions

1. **Apparel** refers to a body covering, specifically referring to actual garment constructed from fabric (Kaiser, 1997). The operational definition of apparel in this study includes both clothing and accessories.
2. **Impulse buying** refers to consumer buying behavior that occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately with no pre-shopping intentions either to buy the product or to fulfill a specific buying task (Rook, 1987).

3. **Apparel involvement** refers to the inherent need fulfillment, value expression, or interest the consumer has in an apparel product (Mano & Oliver, 1993).

4. **Evaluation of website attributes** refers to consumers' perceptions and reactions of the website characteristics where they purchased the product.

5. **Product category and price** refer to the variety of apparel items purchased by the consumer and the amount of money paid.

Objectives of the Study

Based on the purpose of the study, the objectives of this study were:

1. To examine the relationship of consumers' apparel involvement and the impulsiveness of online apparel buying behavior.

2. To examine the relationship of website attributes and the impulsiveness of online apparel buying behavior.

3. To examine the relationship of product category/price and the impulsiveness of online apparel buying behavior.

4. To develop a framework that may explain or predict the impulsiveness of online apparel buying behavior.

CHAPTER TWO
LITERATURE REVIEW

In this chapter, literature in impulse buying, apparel involvement, and Internet apparel shopping are reviewed. Regarding impulse buying, definition, measurements, history of research, models, and precursors are discussed. Past literature about apparel involvement and online shopping are also discussed.

Impulse Buying

Impulse buying has been of theoretical and practical significance to economics, consumer behavior, and psychology (Dittmar et al., 1996). Impulse buying is a pervasive and distinctive aspect of American consumers' shopping lifestyles and an important point for considerable marketing management activity (Rook, 1987). Despite the lifestyle and marketing factors that encourage impulse buying, there is little consensus about what impulse buying actually is and what influences such behavior. This section presents studies and propositions on impulse buying in order to gain better conceptualization of impulse buying.

Definition of Impulse Buying

Since the beginning of impulse buying research in the 1940s, researchers have had difficulty in reaching an agreeable definition of impulse buying. Appendix A shows the definitional elements from previous studies. In general, different definitions in previous studies on impulse buying can be grouped into three categories. The first category of definition started at the beginning stage of impulse buying research (Du Pont Studies, 1945, 1949, 1954, 1959, 1965; Clover, 1950; West, 1951; Bellenger, Robertson, & Hirschman, 1978; Kollat & Willet, 1967), in which, impulse buying was considered similar to unplanned buying. Impulse buying, along with unplanned buying, was simply viewed as an opposite phenomenon to planned buying in these

studies; for example, in the study of Bellenger et al. (1978), consumers' purchases were divided into impulse and non-impulse depending on when the buying decision was made. Impulse buying was defined as purchases where the decision to buy was made in the store today. If the decision to buy was made prior to the time the consumer entered the store, the purchase was defined as non-impulse.

The second categorization started when Applebaum (1951) suggested that impulse buying may be triggered from the consumer's exposure to a stimulus within the store. Based on this notion, Stern (1962) proposed four categories of unplanned purchases, including (a) pure impulse buying, characterized by a purchase breaking the normal buying pattern, resulting from a sudden urge to buy something, (b) reminder impulse buying, wherein the purchaser remembers previous experience or knowledge that causes the impulse buying, (c) suggestion impulse buying, when a consumer sees the product for the first time and is influenced by the point of sale, and (d) planned impulse buying, when a consumer does not have a plan in mind which products to buy when entering a store and when their buying decisions depend upon sales promotions such as price specials or coupon offers. In Stern's categories, all four types of impulse buying occur when a consumer encounters a product or a sales promotion at the point of sale, which can be viewed as a stimulus.

The third category of definition came out when Rook and Hoch (1985) suggested that impulse buying is different from unplanned buying. The author proposed five elements of impulse buying which distinguish impulse buying from non-impulse buying. The five elements of impulse buying are: (a) a sudden and spontaneous desire to act, (b) a state of psychological disequilibrium, (c) psychological conflict and struggle, (d) decrease in cognitive evaluation, and (e) lack of regard to the consequences of impulse buying. Summarizing the five elements, Rook (1987) concluded that "impulse buying occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately. The impulse to buy is hedonically complex and may stimulate emotional conflict. Also, impulse buying is prone to occur with diminished regard for its consequences" (p. 191).

Many researchers modified Rook and Hoch's (1985) definition into different forms; for example, Jeon (1990) stated that impulse buying is "a sudden and immediate purchase with no pre-shopping intentions either to buy the specific product category or to fulfill a specific buying task" (p.170). Extending Jeon's definition, Beatty and Ferrell (1998) stated that "The impulse

buying behavior occurs after experiencing an urge to buy and it tends to be spontaneous and without a lot of reflection" (p.170). Nguyen, Jung, Lantz, and Loeb (2002) combined previous definitions into a three-part definition. The authors defined impulse buying as one type of unplanned buying that is characterized by (a) relatively rapid decision making (Rook, 1987; Rook & Hoch, 1985), (b) being hedonically complex and more emotional than rational (Bayley & Nancarrow, 1998; Rook, 1987; Rook & Hoch, 1985), and (c) not including the purchase of a simple reminder item such as buying a present that fulfills a planned task (Beatty & Ferrell, 1998).

Measurements of Impulse Buying

Jeon (1990) conducted a study to investigate the relationships of affective states, in-store browsing, and impulse buying. As a preliminary stage to develop an instrument to measure impulse buying behavior, the author developed a survey with open-ended and fixed-format questions to explore consumers' experiential episodes of impulse buying. At the beginning of the survey, Rook's (1987) definition of impulse buying, "a sudden and strong urge to buy something you see in the store," was given. Then respondents were asked to recall their most recent impulse buying experience and explain: a) what item (s) they purchased on impulse, b) what caused them to purchase this item (these items) on impulse, and c) how they felt just before and after the impulse purchase. Additional questions addressed the respondents' frequency of impulse buying. Then respondents were provided with a list of 20 situational factors such as sale or discounts, extra money, friendly salesperson, time pressure, and store display, derived from past literature and were asked to check the items that tended to trigger their impulse buying. In order to determine respondents' degree of suddenness and perceived urgency involved in making the impulse purchase, the author used Rook's (1987) and Rook and Hoch's (1985) research on impulse buying to extract a pool of items (specific items are not mentioned in the article) and then refined the statements by a group of three academicians. The final scale included three items (i.e., I felt a spontaneous urge to buy the item, I felt I just had to have the item, I felt I wouldn't be able to get it off my mind until I bought it). A seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree) was used to measure the degree of self-perceived impulsiveness of purchases. The author used 38 college students to test the three final impulsiveness items and the

result showed a reliability coefficient alpha of .83. When they were used in the main survey, the three items showed a reliability coefficient alpha of .72.

Han, Morgan, Kotsiopulos, and Kang-Park (1991) adopted 15 statements from Stern's (1962) impulse buying scale to measure consumers' apparel impulse buying behavior and the degree of impulse buying. Each item was rated on a 7-point scale from 1 (very seldom) to 7 (very often). Prior to the actual survey, the impulse buying scales were pre-tested with 52 respondents, including both students and non-student consumers, selected on a convenience basis. The items with the highest item-scale correlations were selected to evaluate four types of buying proposed by Stern (i.e., planned buying, planned impulse buying, reminder impulse buying, pure impulse buying). Among the four types of buying, Han et al. (1991) considered only pure impulse buying to be impulse buying as Rook (1987) mentioned in his study. The definition of pure impulse buying is similar to that of Rook's definition (i.e., a sudden and strong urge to buy something you see in the store). The results of Han et al.'s (1991) study showed a reliability coefficient alpha of .89.

In 2002, Youn and Faber conducted a study that provides an integrative view of impulse buying behavior by combining affective and cognitive components. In the study, the authors developed the Consumer Buying Impulsivity (CBI) scale to assess the likelihood of engaging in impulse buying. Through series of empirical studies, the CBI was modified into two dimensions, affective and cognitive. The three sub-dimensions under the affective dimension were: irresistible urge to buy, positive buying emotions, and mood management. The three sub-dimensions under the cognitive dimensions were: low cognitive deliberation, disregard of the future, and unplanned buying behavior. The authors used the CBI scale to conduct two surveys and used the factor analysis to simplify the CBI scale from 140 items to 24 items. The results showed that the data had a good fit to the model (i.e., main and sub factors). Structural parameters were validated across two independent samples from the two surveys and the findings showed that the scale was valid for measuring consumer's impulsiveness.

<u>History of Research on Impulse Buying</u>

At the beginning of impulse buying studies (i.e., 1940s to 1970s), most researchers focused on proving the existence and pervasiveness of impulse buying and classifying products

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into impulse and non-impulse items to facilitate marketing strategies. Studies were conducted with marketers' interest in mind to benefit companies instead of the consumer; for example, Du Pont studies (1945-1965) focused on showing how different kinds of products were affected by unplanned buying. Other studies focused on how different retail settings (e.g., store type, shelf location, shelf space, product display) stimulated unplanned buying (Clover, 1950; Cox, 1964; West, 1951). Kollat and Willett (1967) examined consumers' differences in unplanned buying tendency and identified antecedent conditions that led to unplanned buying by using intention-outcomes matrix. To structure the research, an intention typology, an outcome typology, and the categorization that resulted by pairing the typologies were used. The intention typology is the planning stage before consumers are exposed to the in-store stimuli. The typology includes what consumers know before going into the store such as (a) product and brand, (b) product only, (c) product class only, (d) need recognized, and (e) need not recognized. The outcome typology includes behaviors that could result from buying, such as (a) product and brand purchased, (b) product and brand not purchased, and (c) product purchased, brand not purchased. Among the 15 possible categories by pairing the intentions and outcomes, Kollat and Willett suggested that only one category can be defined as unplanned purchase; that is, when both product and brand are purchased with the need not recognized before entering the store. Making a distinction between unplanned buying and impulse buying, D'Antoni and Shenson (1973) criticized confining impulse buying to only the shopping decisions made within the store. Instead, they extended the concept of impulse buying to relative time lapse; that is, if a consumer decides to buy a product less than the usual decision time, it can be defined as more impulsive than the normal buying behavior.

From the 1980s to early 1990s, researchers began to focus on identifying the internal psychological states underlying consumers' impulse buying behaviors in order to solve the definitional problems and to develop marketing strategies (Rook, 1987; Rook & Gardner, 1993; Rook & Hoch, 1985). According to Rook, impulse buying was redefined as when a consumer experiences a sudden, often powerful and persistent urge to buy something. Rook and Gardner (1993) examined underlying emotions of impulse buying and found that impulse buying was triggered by a desire to change or to manage emotions or mood states, and that most of the consumers felt better after the impulse buying behavior. Hoch and Loewenstein (1991) examined impulse buyers' emotional conflicts between psychological forces of desires and willpower, and

proposed that the ability to maintain self-control and to implement long-run decisions successfully depends on the relative strength of the opposing forces of desire and willpower. They stated that there are two distinct forms that self-control attempts can take: desire-based and willpower-based. Desire-based form is when consumers attempt to directly reduce desire by physically or psychologically reducing proximity to the product. Willpower-based self-control is when consumers attempt to overpower desire by relying on willpower itself.

Starting from the 1990s, many studies were conducted to investigate factors that might underlie or cause impulse buying behavior, including the examination of the relationships of affective states, in-store browsing, and impulse buying (Jeon, 1990), the role of information process in impulse buying (Burroughs, 1996), and the normative influences on impulse buying (Rook & Fisher, 1995). Jeon (1990) found that impulse buying was directly influenced by a psychological situation (i.e., subjective state of emotional response to recently encountered stimuli) and in-store browsing. Through the psychological situation and in-store browsing, pre-shopping mood also had an indirect effect on impulse buying. Coley (2002) also examined the affective process involved in impulse buying, and compared the differences between males and females in these processes. The results showed significant differences between males and females in terms of the overall affective process. Females were more likely to exhibit a greater tendency to shop under the influence of emotional mood or related influences of an affective process compared to males. They were more likely to experience an irresistible urge to buy and when the affective dimension took control of willpower, impulse buying took place. Burroughs (1996) proposed that the classical conditioning of positive feelings toward the product would motivate impulse buying. When classical conditioning of positive feelings occur, one reacts with a strong positive feeling towards the product, and then impulse buying is more likely to take place. Rook and Fisher (1995) found that consumers' normative evaluations (i.e., judgments about the appropriateness of engaging in impulse buying behavior) moderated the relationship between the impulse buying trait and consumers' impulse buying behaviors. The relationship between buying impulsiveness and related impulse buying behaviors was significant only when consumers believed that acting on impulse was appropriate.

Some of the recent studies have started to develop models or apply theories to explain impulse buying behavior; for example, Dittmar et al. (1996) developed a theoretical model of impulse buying; Beatty and Ferrell (1998) developed a model for precursors of impulse buying;

McGoldrick, Betts, and Keeling (1999) developed a model of impulse buying during seasonal sales; Coley (2002) and Kim (2003) proposed a modification of consumer decision making process model for impulse buying. The above four models will be described in detail in the following section.

<div align="center">Models Related to Impulse Buying</div>

In 1987, Rook identified a problem emerging from previous studies on impulse buying, which was a lack of theories to guide empirical work of impulse buying studies. Triggered by Rook's statement, several researchers developed models to explain impulse buying behavior.

Theoretical Model of Impulse Buying

Dittmar et al. (1996) presented an operational framework for impulse buying, called theoretical model of impulse buying. This model is based on the social constructionist model of material possessions (Dittmar, 1992) and symbolic self-completion theory (Wicklund & Gollwitzer, 1982). Dittmar developed a social constructionist model of material possessions and conducted a study to examine the model. The author classified respondents' favorite possessions into categories and found that there were gender differences in choosing favorite possessions. Women favored items of sentimental value. They considered their possessions as important because of the emotional comfort that the possessions provide as well as the relationships with others that the possessions symbolize. On the other hand, men considered the possessions as use-related and activity-related, and valued features of the items. Because of these reasons, women tended to buy symbolic products related to the emotional aspect of self on impulse, whereas men tended to buy instrumental and leisure items which project independence and activity on impulse. The author indicated that the differences found in the study could be interpreted as reflecting male and female gender identities defined in both the sociological and social psychological literature.

In addition to the social constructionist model of material possessions proposed by Dittmar (1992), the symbolic self-completion theory, proposed by Wicklund and Gollwitzer (1982), is the other theory that Dittmar et al. (1996) used as the base to develop the theoretical model of impulse buying. The symbolic self-completion theory explains how human beings try

to complete themselves, using symbols. This theory has been used in the psychology area and has also been applied to the consumer behavior area. The basic assumption of this theory is that, every person is committed to a goal, and tension will exist until that goal is reached. The effort to achieve a goal comes from sensing one's own shortcomings and is due to incompleteness. The goal can be an objective one, such as to get a drink of water, boil a potato, assemble a radio, or translate a Spanish letter. If the goal is an objective goal, the criterion for judging whether the goal has been reached is quite evident. If the goal is a subjective one, such as fluent in Spanish, then the definition of 'fluent in Spanish' must be attained by the individual first. This self-definition of the goal often is a creation of society and can be indicated by symbols; for example, one may self-define that to be able to ask for directions in Barcelona is a symbol of fluent in Spanish. Once the concept of self-defining goal is set, one moves on to the central behavior called self symbolizing behavior. To complete the self, the self-symbolizing behavior starts by establishing ideal characteristics of the goal, achieved by using symbols that indicate one's attainment of the goal. Finally, when the goal is achieved, one will judge the goal attainment by evaluating the achievement through self-definition of the goal. Using the same example as above, when one can ask for directions in Barcelona, he believes that he is fluent in Spanish because this is his self-definition of the goal and he has achieved it. Elliott (1994) and Friese and Koenig (1993) started using the symbolic self-completion theory to explain why consumers do addictive consumption and impulsive buying. The authors proposed that when consumers do impulse buying, they are trying to use the products to fulfill the gap between actual self and ideal self because they do not just consume actual products, but also, or even instead, consume the symbolic meanings of those products. Therefore, when the consumer sees a product that fulfills the gap and helps self-completion, he or she is likely to purchase that product on impulse. Purchasing goods is thus a significant element in the construction and maintenance of consumers' self-identities, in the attainment of social status, and in attempts to make themselves feel better and complete.

Based on the social constructionist model of material possessions (Dittmar, 1992) and symbolic self-completion theory (Wicklund & Gollwitzer, 1982), Dittmar et al. (1996) presented the theoretical model of impulse buying. This model predicts that variables such as degree of self-discrepancies, a person's materialism, gender, and compulsive shopping tendencies will determine the goods that are purchased on impulse and the reasons for the purchase. The authors

hypothesized that an individual who experiences a discrepancy between his or her ideal and actual self, and who is disposed to use symbolic consumption as a self-completion strategy, will be motivated to acquire goods which are expected to perform this self-completing role. Such goods are thus likely to be those products that are particularly bound up with self-identity. When an individual confronts a product that reflects his or her self-identity and ideal self, he or she is likely to decide to buy the product on impulse. By applying this model in their study, the authors found that some classes of goods, such as jewelry for women and sports equipment for men were purchased more on impulse than others. In addition, reasons for purchasing a specific product were found to be different depending on whether goods were purchased on impulse or planned. For impulse buying, mood related and self-image reasons were particularly important than functional reasons. Mood was the most important factor for the psychological buying considerations in impulse buying. Results also showed that both male and female respondents with high materialism and high self-discrepancy between their ideal self and actual self showed the greatest compulsive buying tendencies.

Model for Precursors of Impulse Buying

Beatty and Ferrell (1998) proposed a model for precursors of impulse buying. In the model, the authors considered that both situational and individual difference variables affected impulse buying. Time availability and money availability were suggested as situational variables, and shopping enjoyment and impulse buying tendency were suggested as individual variables. Both situational variables and individual variables would influence mood and in-store browsing, thus causing urge to buy on impulse and eventually lead to impulse purchase. Their study results showed that consumers with more available time would browse longer, causing a positive effect that elicit urge to buy on impulse. Money was also a facilitator for purchasing the desired good and producing a positive affect (e.g., excitement) and less negative affect (e.g., frustration) when shopping, and increased the possibility of impulse buying. Regarding the individual variables, Beatty and Ferrell found that one's shopping enjoyment produced a positive feeling in the shopping environment, which in turn influenced one's urges to buy on impulse. Impulse buying tendency was another precursor of impulse buying behavior. In this study, impulse buying tendency (IBT) was defined as "the tendencies (1) to experience spontaneous and sudden urge to make on-the-spot purchases and (2) to act on these felt urges with little deliberation or evaluation

of consequence (p.174)". Beatty and Ferrell found that consumers with higher impulse buying tendency felt more urges to buy on impulse.

Model of Impulse Buying during Seasonal Sales

Bitner (1992) proposed that consumers' perceptions of the environment through their response moderators could influence their behavior. The response moderators are consumers' cognitive characteristics and socio-demographic characteristics. Using seasonal sales as an example, consumers' cognitive characteristics are beliefs and images about seasonal sales. The response moderators then produce cognitive responses that result in either approach or avoidance of the situation of seasonal sales. This framework follows the causal flow from perception through beliefs to behavior, and provides the basis for a conceptual model of consumer reactions to the environment, such as seasonal sales. Bitner suggested that an individual's demographic status can have a direct impact on impulse buying; for example, consumers with more disposable income may feel less risk of wasting money through impulse buying. Singles living independently may not only have more disposable income but also feel less accountable to others for spending money on impulse. Consumers without children may feel less time-pressure when shopping thus able to decide the shopping choices more carefully. An individual's cognitive characteristics could also have an important impact on impulse buying; for example, based on an individual's beliefs and image about shopping during seasonal sales, one may expect some benefits and disbenefits from shopping during the sales that will help or hinder the achievement of his shopping goals. If the beliefs are positive, impulse purchases are more likely to happen. Avoidance of dissonance could be another cognitive characteristic. Avoidance of dissonance happens when shoppers are unsure of their judgment. Consumers often anticipate that bad feelings will occur if their decisions bring negative outcomes. However, if they also have a sudden desire to purchase the product, they will feel uncomfortable about the conflict between the concern for negative outcomes and the desire of the product. In order to avoid dissonance, shoppers look for information that is congruent with their decisions. For example, they may exaggerate sales saving and avoid looking at prices of other reduced products after the purchase. In the situation of the seasonal sales, the perceived situational benefit (e.g., good price) and time pressure to buy may be exaggerated to reduce the anticipation of the risk involved in buying on impulse during seasonal sales.

Based on the conceptual model proposed by Bitner (1992), McGoldrick et al. (1999) conducted a study to examine impulse buying behavior during seasonal sales. The results showed that social-demographic variables (i.e., marital status, income, age) had a direct effect on price/experiential satisfaction at purchase and impulse buying. Price satisfaction was defined as being satisfied with price motives whereas experiential satisfaction was defined as being satisfied with non-price motives such as acquisition of merchandise and shopping enjoyment. Beliefs/image variables (i.e., confidence in seasonal sales system, sale skepticism, self-confidence about making the right buying decisions) had a direct effect on price/experiential satisfaction, and the price/experiential satisfaction had a direct effect on impulse buying. Avoidance of dissonance also was found to have a direct effect on impulse buying. Avoidance of dissonance in seasonal sales shopping was the thoughts designed to avoid dissatisfaction and to increase satisfaction such as justifying buying behavior in the sales situation. Results also showed that being in younger age groups (the age has not been specified in the study) and the degree of price satisfaction were the two strongest indicators of impulse buying. The authors also found that shoppers overcame possible misgiving of their purchase in two ways. One was by having confidence in their own ability to find true bargains and not be manipulated by retailers, and the other way was by using strategies for avoidance dissonance by justifying themselves about their impulse buying behavior (i.e., convincing oneself that the price was a good deal, product was worthy of buying).

Modification of Consumer Decision Making Process Model for Impulse Buying

In Coley (2002)'s study, the model of consumer decision-making process (Engel & Blackwell, 1982) was adjusted to include impulse buying process. In Engel & Blackwell's decision-making process model, consumers process information in five stages before making a buying decision. These five stages are problem/need recognition, search for alternative solutions, evaluation of alternatives, purchase and post-purchase use and reevaluation of chosen alternatives. Coley (2002) argued that the model lacked a stage of impulse buying and proposed that the impulse buying stage should appear after the problem/need recognition stage and then go directly to purchase stage, skipping search for alternative solutions and evaluation of alternatives. Coley also proposed that cognitive and affective components both influence how and to what extent emotions or reasons drive impulsiveness.

Similar to Coley (2002)'s adjusted model, Kim (2003) developed another impulse buying process model based on the model of the consumer buying process by Churchill and Peter (1998). The original model by Churchill and Peter includes five steps of need recognition, information search, alternative evaluation, purchase decision, and post-purchase evaluation and the consumer buying process is influenced by social, marketing, and situational factors. In the model of impulse buying process proposed by Kim (2003), steps of need recognition, information search, and alternative evaluation in the original model are entirely skipped, and the model starts with product awareness. Kim suggested that impulse buyers begin browsing without having an intention to buy a specific product or visit a certain store. As consumers browse and are exposed to the stimuli, the desire to buy on impulse is triggered. In the decision-making process model proposed by Churchill and Peter (1998), three factors are included as the influences of consumers' decision-making process. They are: social influences (e.g., culture, subculture, social class, family, reference groups), marketing influences (e.g., price, product, placement, promotion), and situational influences (e.g., physical surroundings, social surroundings, time, task, money, momentary conditions). Kim (2003) changed the three influences proposed by Churchill and Peter (1998) to two factors, internal factors (e.g., mood/need/desire, hedonic pleasure, cognitive/affective evaluation) and external factors (e.g., visual merchandising, window display, in-store form display, floor merchandising, promotional signage) as the influences of impulse buying. Internal condition/mood or external stimuli, or both can create strong desire to purchase a product and thus lead to impulse buying behavior. When impulse buyers feel an irresistible urge to buy regardless of their previous intention, they make a buying decision without information search or alternatives evaluation. At the post-purchase evaluation stage, consumers may experience positive or negative consequences after the impulse buying of the product.

Impulse Buying Researches on Apparel Products

In previous studies (Bellenger et al., 1978; Prasad, 1975; Williams & Dardis, 1972), apparel products have been found to be one product that was most often purchased on impulse; for example, by comparing the ranking of merchandise categories according to the rate of incidence of impulse buying (the term "unplanned buying" was used in the study), Prasad (1975)

found that women and girls' wear, and men and boys' wear were purchased most frequently on impulse. In the study of Bellenger et al. (1978), costume jewelry and women's sportswear were the two most frequently purchased products on impulse.

Han et al. (1991) compared the impulse buying behavior of three groups of female consumers: which were (a) non-textiles and clothing students (b) textiles and clothing students, and (c) non-student consumers, using Stern (1962)'s four categories of impulse buying (i.e., pure impulse buying, reminder impulse buying, suggestion impulse buying, planned impulse buying). The results showed that students, especially textiles and clothing students, were more likely to be impulse buyers than non-students. In general, students tended to decide what to buy while they were at the store by looking around (i.e., planned impulse), tended to buy anything they wanted (i.e., pure impulse), and were more likely to buy new styles or designs of clothing (i.e., fashion-oriented impulse). On the contrary, non-student consumers were more likely to be planned buyers. Piron (1993) compared emotional reactions experienced by planned, unplanned and impulse purchasers on clothing items and found that emotions such as sudden and imperative desire to purchase came ahead of impulse buying, and feeling good resulted from impulse buying. Chen-Yu and Seock (2002) compared clothing purchase motivation of impulse and non-impulse adolescent shoppers. In this study, about half of the participants were impulse shoppers. They spent more time and more money (i.e., almost twice the amount of money) in shopping than non-impulse shoppers. The authors also identified that the possible reason why impulse shoppers shop is to satisfy many different needs (i.e., recreation, conformity, sexual attraction, recognition). All these needs were more important to impulse shoppers compared to non-impulse shoppers.

In a recent study by Kim (2003), the relationship between college students' apparel impulse buying behavior and visual merchandising was examined. The results indicated that visual merchandising techniques of in-store form/mannequin display and promotional signage were significantly related to college students' impulse buying behaviors. Phau and Lo (2005) found that fashion innovators exhibited impulse buying behavior and suggested that marketers should consider retail store layouts to appeal to innovators, initiating unplanned purchases.

<u>Antecedence of Impulse Buying</u>

Previous studies identified numerous factors that were related to impulse buying. The factors can be divided into three categories; individual, situational, and marketing factors.

Individual Factors

Individual factors were used mostly on early stage of impulse buying studies, including demographic variables (i.e., age, gender, race, income), personality traits (i.e., impulsiveness, stress reaction, absorption), normative influence, hedonic shopping value, individual efforts (i.e., time efforts, money efforts, physical effort, mental effort), and knowledge of shopping environment.

<u>Demographic variables</u>.   Many studies examined the relationships of demographic variables and impulse buying behavior. Bellenger et al. (1978) examined the relationship between the tendency of impulse buying and demographic characteristics such as age, gender, race, and income, and found that impulse buying was only related to age. Impulse buying tended to be greater in the under-35 and over-65 age groups than in the age between 35 and 64 group. Consistently, Rook and Hoch (1985) also found that younger consumers bought more on impulse than older consumers; however, participants' age has not been mentioned in this study. Similar to Bellenger et al.'s (1978) study, Underhill (1999) also found that the tendency of impulse buying for both genders was similar. Approximately 60 to 70% of purchases in supermarket by both genders were on impulse. However, Cobb and Hoyer (1986) also conducted a study in supermarket settings and found inconsistent results with Underhill's study. The authors found that more men than women were categorized as impulse buyers, and women were more likely to plan before entering the supermarket store. The difference in the definitions of impulse buying used in the two studies maybe is the reason for the different results. In Underhill's (1999) study, impulse buying was defined as similar to Rook and Hoch's (1987) definition, which was a sudden urge to buy something immediately, but in Cobb and Hoyer's (1986) study, impulse buying was viewed as same as unplanned buying. As Cobb and Hoyer's results, Rook and Hoch also found that gender was significantly related to impulse buying; however, it is in the opposite direction. In the Cobb and Hoyer's study, more men than women were categorized as impulse buyers. In this study, females were more impulsive than men when shopping. The possible

reason for this discrepancy is that Cobb and Hoyer's study was related to grocery shopping in a supermarket setting but Rook and Hoch's (1985) study was in general aspects of shopping. In Rook and Hoch's study, men enjoyed buying goods that were considered as non-impulse, utilitarian items like stereos, automobiles, appliances, and athletic equipment whereas women enjoyed shopping for aesthetic goods like clothing and grooming products. Rook and Hoch indicated that the gender difference in impulsiveness could be partly explained by the difference in the products that men and women usually enjoy buying. Dittmar et al. (1996) also proposed that men and women would buy different products on impulse. Products with sentimental value, providing emotional comfort, symbolizing relationships with others, and related with appearance and emotional part of self, such as clothes, jewelry, and cosmetics, were bought more on impulse by women for themselves or gifts to others, while products related to leisure use and self-expressive, such as high-tech, electronic and sports equipments, were bought more on impulse by men.

Personality traits.   Youn and Faber (2000) examined the relationship between impulse buying and some relevant personality traits. Among 11 primary personality dimensions identified by Tellegen (1982), the authors used three personality traits (i.e., impulsiveness, stress reaction, absorption) to examine the relationship of personality traits and impulse buying behavior. In the study, impulsiveness was defined as the individual's characteristic mode of monitoring impulse. Stress reaction represented systematic individual differences in the frequency and intensity of responding to situational cues with negative emotional states (i.e., anxiety, anger, distress, and guilt). Absorption was a tendency to become immersed in self-involving experiences triggered by external and imaginal stimuli. The results showed that all three personality traits were related to impulse buying tendencies. A general characteristic of impulsiveness might lead to acting on impulse in a specific consumption context. Strong stress reaction might lead to impulse buying to relieve or escape stress and anxiety. The relationship between absorption and impulse buying suggested that consumers might be particularly susceptible to environmental stimuli that could contribute to their impulsive behavior.

Normative influence.   Past researchers view impulse buying behavior as a negative aspect of consumer behavior and characterized impulse buying as a sign of immaturity that results in a lack of behavioral control (Levy, 1976) or as a risky, wasteful, and irrational behavior (Ainslie 1975; Levy 1976). However, Hausman (2000) indicated that impulse buying is not

always viewed negatively by consumers, but represents a rational alternative to a more time-consuming search behavior as well as a behavior that satisfies variety of non-economic reasons, such as fun, fantasy, and social or emotional needs. Consistent with Hausman's argument, Rook and Fisher (1995) stated that only 20% of respondents in their study reported feeling bad about their impulse purchases and 41% of respondents reported that they felt good about their impulse purchases. Rook and Fisher presented that consumers' normative evaluations moderate the relationship between the impulse buying trait and consumers' buying behaviors. They defined normative evaluations as "consumers' judgments about the appropriateness of making an impulsive purchase in a particular buying situation" (p. 306). The authors argued that although impulse buying has been viewed as irrational, immature, wasteful, and risky, to some extent the motives for and results of impulse buying could be less problematic. In many cases, impulse buying involves only minor infraction of relevant norms, and in other situations, normative influences may even encourage acting on impulse as the right action. Rook conducted a study to examine his propositions and the results showed that consumers with positive normative evaluations were more likely to act in a way that was consistent with the degree of their buying impulsiveness trait. On the other hand, individuals with low impulsive tendency and who judge impulse buying negatively were unlikely to act on impulse. These results are consistent with Rook's argument in an earlier study in 1987. The author suggested that one's impulses are a result of two conflicting forces, which are the pleasure principle and the reality principle, and the two forces conflict because it is difficult to resist impulses that often come with pleasure experiences that compromise reality principle with immediate gratification. By including normative evaluations in the equation of the Fishbein model, as an alternative to the subjective norm component, the study in 1987 showed clear insights about the conditions under which the impulse buying trait would translate into actual impulse buying behavior.

Hedonic shopping value.   When consumers shop, they experience both utilitarian and hedonic shopping value. Babin, Darden, and Griffin (1994) developed scales for hedonic and utilitarian shopping value and some differences were found by comparing hedonic and utilitarian shopping value. Utilitarian shopping value involves less risk propensity, heuristics, and goal fulfillment (Engel, Blackwell, & Miniard, 1993), whereas hedonic shopping value involves entertainment and emotional benefits (Jin, Sternquist, & Koh, 2003; Babin et al., 1994). According to previous studies, fun, enjoyment, freedom, fantasy, diversion, increased arousal,

and escapism from routine life could induce hedonic shopping value (Holbrook & Hirschman, 1982; Tauber, 1972) and consumers' impulse buying behaviors were related to their desire to satisfy hedonic needs (Hirschman, 1992; Holbrook & Hirschman 1982; Kim, 2003). Jin et al. (2003) defined hedonic shopping value as "the degree to which consumers perceive emotional benefits through the experience of shopping rather than simply through product acquisition" (p.381) and they proposed that recreational shoppers (i.e., consumers who enjoy shopping) are likely to experience high levels of hedonic value. Many study results are consistent with Jin et al.'s proposition. Cobb and Hoyer (1986) and Rook (1987) found that consumers felt energized or uplifted after impulse shopping. Bellenger and Korgaonkar (1980) found that recreational shoppers felt more gratification from the process of shopping than from the merchandise itself, and they were more likely to go on shopping without a pre-planned purchase in mind. Beatty and Ferrell (1998) examined the precursors of impulse buying and found that one's shopping enjoyment produced a positive feeling in the shopping environment, which in turn influenced one's urge to buy on impulse. Consistently, Hausman (2000) found that needs for fun, novelty, and surprise were motives for impulse buying. As a result, consumers who were more impulsive were more likely to shop for hedonic reasons than those who were less impulsive. Chang, Burns, and Francis (2004) proposed that consumers acquire a different level of hedonic shopping value when shopping for hedonic products such as fashion apparel or perfume than when shopping for utilitarian products such as office supplies and batteries. The authors conducted a study to examine the role of hedonic shopping value on shopping experience satisfaction and the results showed that hedonic shopping value was influenced by product involvement, variety seeking tendency, and physical environment of stores.

Individual efforts.   Stern (1962) proposed that various individual efforts (i.e., time effort, money effort, physical effort, mental effort) may have significant relationships with impulse buying. The author defined money as any costs that occur when going to and coming back from the store as well as the cost of the good itself, time as the amount of time needed to go to and come back from the store, physical effort as walking or driving to and coming back from the store, and mental effort as scheduling the budget and trip to the store. He proposed that impulse buying is related to ease of buying. When buying requires less spending of above resources, the buying behavior becomes more impulsive.

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Knowledge of shopping environment.   Iyer (1989) examined the relationship between knowledge of shopping environment and impulse buying. In this study, the knowledge of shopping environment was defined as the knowledge of store layout in a shopping context. The author found that the lower the knowledge, the higher the amount of impulse buying because when the knowledge of store layout was low, consumers tended to rely more on recognition of external cues than recall retrieved from internal memory. When recognition rather than recall triggers need, shoppers tended to pay more attention on in-store displays and other cues in the store. Increased exposure to in-store stimuli enhanced the likelihood of recognizing needs that had not been considered before, which led to impulse buying.

Situational Factors

Researchers suggested that situational factors may also influence impulse buying. Situational factors include time and money availability, mood, and others such as the time of shopping (day/evening), nature of shopping trip (major/fill-in), existence of a prepared shopping list, shopping party composition (alone/with adults only/with children), and distance traveled to the store.

Time and money availability.   In the impulse buying model proposed by Beatty and Ferrell (1998), time availability and money availability were included as precursors of impulse buying. The authors considered time availability and money availability as two situational variables. Time availability was defined as "the amount of time the shopper feels she or he has available that day" (p. 175), which was the opposite of time pressure. The authors proposed that consumers with more available time would browse longer, causing positive affect that would elicit an urge to buy on impulse, and ultimately would influence impulse buying. Iyer (1989) conducted a study to examine the role of time pressure on impulse buying. The author defined time pressure as "the perceived constriction of the time available for an individual to perform a given task" (p.43). Consistent with the proposition of Beatty and Ferrell (1998), the author found that the lower the time pressure, the higher the amount of impulse buying and vice versa. Beatty and Ferrell defined money availability as "the amount of budget … the individual perceives she or he has … on that day" (p. 176). The authors connected money availability directly with impulse buying because they saw money as a facilitator for purchasing the desired good. Money

was also considered as producing more positive affect (i.e., excitement) and less negative affect (i.e., frustration) when shopping, and therefore, would increase the possibility of impulse buying.

Mood.   Mood and emotion are the key elements of consumers' situational environment (Belk, 1988). Consumers' emotions or affective states have been regarded as potent internal triggers for impulse buying, and it was speculated that impulse buyers were more likely to be responsive (or sensitive) to their emotional conditions than non-impulse buyers (Rook & Gardner, 1993). Some studies proposed that impulse buying might be partially motivated by a desire to change, or to manage emotions or mood states, and impulse buyers were found to be more likely to buy on impulse in both positive and negative moods than non-impulse buyers (Gardner & Rook 1988; Rook 1987; Rook & Gardner 1993). Rook and Gardner conducted a study and asked the respondents to select one mood state that would most likely motivate them to do impulse buying from a list of mood types, and to describe how they were feeling just before they made an impulse purchase. Results showed that the respondent's choice of mood types that was likely to motivate impulse buying was consistent with the choice of mood just before impulse buying. This result indicated that certain moods would motivate impulse buying. Jeon (1990) suggested that positive mood stimulates tendencies to engage in mood congruent behavior and to engage in greater browsing while shopping. Consumers in a positive mood are more likely to perceive a favorable psychological situation and browsing may lead to greater impulse buying in order to maintain a positive mood. His study results confirmed that pre-shopping mood had a positive effect on pleasure, which was positively related to impulse buying. Similarly, Beatty and Ferrell (1998) also found that in-store browsing increased consumers' positive mood, and positive mood increased the feeling of urge to buy on impulse. However, different from the propositions in some studies (Gardner & Rook 1988; Rook 1987; Rook & Gardner 1993), the results showed that negative mood did not influence the urge of impulse buying.

Other situational factors.   In Kollat and Willett's (1967) study, factors such as (a) the time of shopping (day/evening), (b) nature of shopping trip (major/fill-in), (c) existence of a prepared shopping list, (d) shopping party composition (alone/with adults only/with children), and (e) distance traveled to the store, were examined as factors that may influence impulse buying. The results showed that impulse buying did not significantly vary with any of the factors mentioned above.

Marketing Factors

Youn and Faber (2000) found that high impulsive buyers were more reactive to marketing factors. Marketing factors include type and cost of products, store environment (e.g., shelf location, shelf space), in-store stimuli (e.g., advertisements, promotional gifts, visual element), and other marketing factors (e.g., classical conditioning, credit cards, cash machines, online retailing).

Type and cost of products.   Impulse buying studies on product types assume that some types of items are more subject to impulse buying than other types (Clover, 1950), and therefore, these studies focused on classifying product types into impulsive or non-impulsive items (Bellenger et al., 1978; Clover, 1950; Du Pont, 1965; Kollat & Willet, 1967; POPAI, 1963; Prasad, 1975; West 1951; Williams & Dardis, 1972). According to previous studies, women's wear (Clover, 1950; Prasad, 1975; Williams & Dardis, 1972), men's wear (Bellenger et al., 1978; Williams & Dardis, 1972; Prasad, 1975), baked goods or sweet (West, 1951), jewelry (Bellenger et al., 1978; West, 1951), cosmetics (Bellenger et al., 1978; POPAI, 1963; West, 1951), and grocery (Du Pont, 1965; Kollat & Willet, 1967) were found to be purchased on impulse. However, many researchers argued that classifying impulse and non-impulse item categories is useless because any products can be purchased on impulse (Stern, 1962; Kollat & Willet, 1969; Rook, 1987), especially when impulse buying is considered the same as unplanned buying, which was the most popular definition of impulse buying used in the studies of classifying impulse and non-impulse items.

Deshpande and Krishnan (1980) examined the relationship between impulse purchases and cost of items by using survey of department store customers in two metropolitan areas and found that cost of an item was associated with impulse buying behavior. Items that cost less than $25 were more likely to be purchased on impulse than the items that cost more than $25. The study of impulse buying behavior during seasonal sales by McGoldrick et al. (1999) also showed a positive relationship between the cost of a product and impulse buying. Almost 60 % of the respondents bought more spontaneously during seasonal sales.

Store environment.   Some studies found that atmospheric cues in the retail environment (i.e., sight, sound, smell) were important triggers of impulse buying (Eroglu & Machleit, 1993; Mitchell, 1994). In Eroglu and Machleit's study, a tie store used leather and tobacco scents to create an atmosphere, which successfully triggered more impulse purchases. Mitchell found that

when cleanser products were scented with a pine scent, consumers inferred that there was extra cleansing power from the odor, thus increasing buying behavior. Quelch (1983) suggested that consumers have a natural tendency to perceive and pay attention at the eye level of a shelf location, and therefore, would increase the rate of unplanned purchase in retail stores. Cox (1970) examined the relationship between sales of a brand and its shelf space and found that there was no significant relationship between the amount of shelf space given to a staple product and total unit sales of the brand. Instead, Cox found a positive relationship between the amount of shelf space given to an impulse product that had high consumer acceptance and total unit sales of that brand. However, when the impulse brand had low consumer acceptance, there was no significant relationship between the amount of shelf space given to the brand and total unit sales of that brand.

In-store stimuli.   In-store stimuli are promotional techniques used to increase impulse buying of products (Abratt & Goodey, 1990). Youn and Faber (2000) found that high impulsive buyers were more reactive to marketing factors such as advertisements, promotional gifts, and visual elements. Abratt and Goodey (1990) also found that in-store stimuli affected impulse buying significantly. Stimuli with sign on shelf, price, special displays, point of sales, and end-of-aisles displays accounted for 70% of items that triggered impulse buying in supermarkets. According to Stern (1962) and Kim (2003), consumers' exposure to in-store stimuli triggers impulse buying because in-store stimuli work as a form of information aid and as a reminder to buy something for consumers who enter the store without any planning. In-store stimuli are most often encountered with in-store browsing which is defined as "the in-store examination of a retailer's merchandise for recreational and informational purposes without an immediate intent to buy" (Bloch, Ridgway, & Nelson, 1991, p.14). Jarboe and McDaniel (1987) found that consumers who browsed more showed more impulse buying behavior than non-browsers. Kim (2003) suggested that the reason for Jarboe and McDaniel's results is that as consumers browse longer, they are likely to encounter more stimuli that lead them to increase possibility of impulse buying behavior.

Other marketing factors.   Burroughs (1996) proposed that classical conditioning of positive feelings toward the product would motivate impulse buying. When classical conditioning of positive feelings occurs, one reacts with strong positive feeling towards the product and then impulse buying takes place. Other researchers also suggested that marketing

innovations such as credit cards, cash machines, instant credit, and online retailing made it easier for consumers to buy things on impulse (Rook, 1987; Rook & Fisher, 1995).

Consequences of Impulse Buying

Researchers agree that impulse buying involves a hedonic or affective factor and impulse buying satisfies a number of hedonic desires. (Piron, 1991; Rook, 1987; Rook & Fisher, 1995; Weinberg & Gottwald, 1982; Thompson, Locander, & Pollio, 1990). Weinberg and Gottwald found that impulse buyers exhibited greater feelings of amusement, delight, enthusiasm, and joy. Consumers also reported feeling uplifted or energized after a shopping experience in several qualitative studies conducted by Rook (1987). In the study of Rook, 19% of the respondents described the impulse to buy as being very stimulating, explaining it as exciting, thrilling, or wild, and 41% of the respondents reported that hedonic elements such as good, happy, satisfied, light, wonderful, or high feeling occurred with impulse buying. Gardner and Rook (1988) explored the relationship between consumers' impulse buying behavior and the internal affective states that followed by their impulse purchases. This study examined the specific feeling states, valence of affective states, and level of arousal associated with post-purchase feeling states. Results showed that 75% of the respondents reported that they felt better after their impulse purchase. The reasons for this feeling were because the consumers thought they were getting something they needed and accomplishing a necessary task. Another very important reason for the consumers to buy on impulse was mood alteration, the role of impulse buying on breaking out of a negative mood state. Other reasons included enjoyment of the novelty, the surprise that the impulse buying provided, as well as getting a good deal. However, post-impulse purchase moods were not uniformly positive. In the study, 37.9% of the respondents felt somewhat to extremely guilty after buying on impulse. Some respondents had both positive and negative mood at the same time. Rook and Gardner (1993) re-examined the post purchase affective state and found that 75% of respondents reported feeling better after the impulse buying, which was consistent with their prior study in 1988. However, 8.0% of respondents in 1993 study reported feeling worse, which was significantly less than the percentage in the 1988 study (i.e., 37.9%)

Apparel Involvement

Rothschild (1984) defined involvement as "a state of motivation, arousal, or interest" (p. 75). According to Mano and Oliver (1993), product involvement is defined as "the inherent need fulfillment, value expression, or interest the consumer has in a product" (p. 452). It is a central motivation factor that shapes consumers' attitudes and behaviors (Kim, Damhorst, & Lee, 2002), and involves consumers' feelings of interest, enthusiasm, and pleasure toward a specific product category (Goldsmith & Emmert, 1991). Ganesh, Arnold, and Reynolds (2000) identified two dimensions of involvement, purchasing involvement and ego involvement. Purchasing involvement is defined as "involvement which relates to the level of concern for or interest in the purchase process triggered by the need to consider a particular purchase" (p. 68), such as cost, effort, or investment in a purchase (Chang et al., 2004). Ego involvement is defined as "importance of the product to the individual and to the individual's self concept, values, and ego" (Beatty, Kahle, & Homer, 1988, p. 150), which is related to a persistent interest in a product category (Chang et al., 2004).

Involvement with products and services can lead to involvement with related advertising and buying decisions (Zaichkowsky, 1985). The buying situation and product characteristics can influence involvement dimensions as well as consumers' needs, values, and perceived risk that generate different types of behavioral response to a product (Bloch & Richins, 1983; Richins & Bloch, 1986). Behavioral outcomes associated with product involvement can include frequent purchase and use of a product, increased acquisition of product information, and frequent care of a product (Richins & Bloch, 1986; Zaichkowsky, 1985).

Kapferer and Laurent (1985/86) examined consumers' level of involvement among 20 product categories. The authors suggested three reasons for product involvement, which are sign, pleasure, and perceived importance. The sign value of a product represents consumers' perception of the product's ability "to express one's status, one's personality, or identity" (p. 49); the pleasure value is "the hedonic and rewarding value of the product class" (p. 50); the perceived importance is "the centrality of the product class to the individual" (p. 50). The results showed that consumers had high involvement with dresses, perfumes, and bras. When the authors asked the respondents to rate dresses in terms of sign, pleasure, and perceived importance, dresses were rated above average on all three values and highest on the sign value,

indicating that compared to all other products, dresses had the strongest ability to communicate messages about the individual's identity. Although apparel products are often recognized as products that induce high involvement (Bloch, 1986; Goldsmith & Emmert, 1991; Kapferer & Laurent, 1985/86), consumers may have various levels and types of involvement with different apparel items because apparel products have multifaceted features and characteristics that shape involvement (Kim et al., 2002); for example, because of the symbolic characteristic of outerwear, which plays a role in the wearer's identity, outerwear involvement is likely to be high for many consumers (Kapferer & Laurent, 1985/86), whereas socks may bring lower levels of involvement, especially if the item is cheap and purchased frequently (Traylor & Joseph, 1984).

Lee (2000) collected 107 items from previous measures of product involvement to generate appropriate sentences to measure consumers' involvement, specifically with apparel products. From the 107 items, 39 items were chosen based on two criteria (i.e., capability to reflect specific characteristics of apparel products, capability to be adapted to various situations of specific apparel product use). According to the pretest results, 25 items were included in the final measure of apparel involvement, which consisted of five dimensions: sign value, pleasure value, perceived importance, risk importance, and risk probability. The reliability coefficient alphas were tested on the 25 items and three items were deleted in order to improve reliability estimates. The final apparel involvement measure consisted of six sign value items, five pleasure value items, four perceived importance items, four risk importance items, and three risk probability items. The reliability coefficient alphas of five dimensions were: .82 for sign value, .85 for pleasure value, .87 for perceived importance, .70 for risk importance, and .67 for risk probability.

Tigert, Ring, and King (1976) conducted a study using surveys from 1,000 husbands and wife couples, and found that women respondents had higher fashion involvement than men did. Respondents who were highly involved in fashion influenced the fashion adoption process significantly by purchasing more apparel products and willing to pay more than average shoppers. When a new apparel product appears in the fashion market, consumers with high fashion involvement would purchase the product even if the price were high. They were also more innovative and engaged in interpersonal communication related to fashion than the average apparel shoppers. Shim and Kotsiopulos (1993) conducted a study on female adult consumers and found that highly involved apparel shoppers were confident and felt that they were capable

of choosing apparel products for themselves. They were economical and price conscious, favored apparel products made in the U.S.A., and were moderate users of credit cards. In the study of Fairhurst, Good, and Gentry (1989), the Personal Involvement Inventory developed by Zaichkowsky (1985) and fashion involvement scale developed by Tigert et al. (1976) were combined and used to compare the level of fashion involvement. The respondents were consisted of women's specialty store consumers between ages of 30 to 50 and female students between ages of 18 to 20. The results showed that younger students tended to be more involved in buying apparel products than older women specialty store shoppers.

Related to hedonic shopping value, Holbrook and Hirschman (1982) proposed that consumers show more involvement in hedonic consumption than in utilitarian consumption. In a study by Chang et al. (2004), involvement consisted of both purchasing involvement and ego involvement, which had a positive direct relationship with hedonic shopping value and an indirect positive relationship with consumers' satisfaction with their shopping experience. Specifically, the results indicated that the role of hedonic shopping value was an important mediator between involvement and shopping experience satisfaction. Yurchisin & Johnson (2004) examined the variables related to compulsive apparel buying behavior based on the theoretical model of impulse buying, proposed by Dittmar et al. (1996). The authors found a positive relationship between apparel-product involvement and compulsive buying behavior. The authors suggested that a possible reason for this result is that high involvement consumers consider the sign value of a product very important (Kapferer & Laurent, 1985) and many apparel products have a high communicative value (Damhorst, 1984-85; Kwon & Farber, 1992), so highly involved consumers are more likely to purchase apparel products compulsively.

Internet Apparel Shopping

The Internet has received a great deal of attention in the media and many companies have set up an Internet websites (Park & Stoel, 2002). Companies are quickly moving to use the Internet as a way of segmenting markets and reaching consumers across the country and around the world interactively at a reasonable cost (Ainscough & Lucken, 1996). The Internet is "a collection of interlinked computer networks or a network of networks" (Rowley, 1996, p.27). More than 100 countries are linked in this global network to exchange data, news, and opinions

(Webopedia, 2002). Although historically the original purpose of the Internet was for military and academic use, its potential for business has grown considerably (Murphy, 1998). According to an online survey of 39,000 consumers conducted by eCommerce Pulse (2002), 48.2% of consumers with the Internet access made purchase using online shopping websites and e-commerce sales totaled 53 billion dollars in 2001.

The Internet has been used for various purposes such as interactive communication, information search, and shopping for product. Gathering information about products and services is the most common Internet activity especially for younger consumers who are the strongest predictor of future online shopping adoption (Lohse, Bellman, & Johnson, 2000). For early online retailers, low prices and a web presence were believed to be key drivers of success, but recently, online service attributes has become essential for creating consumer loyalty and improving consumer satisfaction (Kim, Kim, & Lennon, 2006). Shopping for products via the Internet is getting more attention from consumers for several reasons (Park, 2002). Ellsworth and Ellsworth (1996) stated that the Internet provides consumers with the opportunity to benefit from the immediate delivery of information that allows comparison shopping to be easier. Internet shopping also has an advantage of shopping 24-hour and seven days a week. Through Internet shopping, consumers can get customized products and services which will add up to their satisfaction (Seock, 2003). Internet shopping was also considered as providing responsiveness in product delivery and cost savings through low prices (Elliot & Fowell, 2000) as well as unlimited browsing activities, numerous product assortments, and live communication with sales associates through chat function (Walsh & Godfrey, 2000). According to PricewaterhouseCooper E-Retail Intelligence System, online apparel shoppers were more likely than non-online apparel shoppers to agree that the Internet shopping saved time and provided them with easier shopping experience compared to offline store shopping (CyberAtlas Trends & Statistics, 2000). To retailers, Internet shopping offers reduction of costs of maintaining physical stores as well as costs for marketing, sales, and distribution (Murphy, 1998). Internet shopping also has some challenges for the consumers such as consumers' confidence in security (Murphy, 1998). The issue of security is one of the large barriers to consumers, and results from Booker's (1995) study showed that the majority of consumers who browsed or searched the Internet did not make purchases for this reason. However, this problem is predicted to disappear soon because there are various systems that are attempting to overcome the problem in security (Murphy, 1998). Return

of merchandise can be another problem for shoppers. Settle (2000) suggested ways to make the return process more convenient for the shoppers (e.g., return to the nearest offline store, pay for the exchange shipping fee). This is a customer service that would benefit both consumers and retailers.

Regarding characteristics of Internet shoppers, several studies investigated the relationships of income, education, gender, and age with consumers' early adoption, use of the Internet, as well as Internet shopping (Burroughs & Sabherwal, 2002; Wellner, 2001). Burroughs and Sabherwal found that income was a determining factor in Internet purchases and that consumers with higher income used the Internet for shopping more than those with lower income, even though the income level among adopters of the Internet for product purchasing has decreased over time. Wellner (2001) found that 49% of the respondents who used the Internet for three or more years had a college education compared to those who just started using the Internet. Regarding the gender of consumers using the Internet, Bickle and Shim in 1993 found that 95% of online shoppers were adult men, but more recent studies indicated that the percentage is getting more even to men (62%) to women (38%) (CommerceNet, 1999) and women are adopting the Internet shopping faster than men (Bernadete, 1999; Ernst & Young, 2001). Weiser (2000) investigated college students and also found that there was no significant difference between genders with Internet shopping. Some studies showed that men used the Internet for leisure and entertainment whereas women used it for interpersonal communication and educational assistance (Bimber, 2000; Odell, Korgen, Schumacher, & Delucchi, 2000; Weiser, 2000). Smith and Whitlack (2001) also found that men and women used the Internet for different functions. Men used the Internet for investments, exploring, discovery, and downloading software whereas women used the Internet for cooking ideas, medical information, chatting, general reference, books, and government information. Some studies investigated the age of Internet users and found that younger consumers were more likely to purchase goods and services on the Internet than older consumers (Donthu, 1999; Lee & Johnson, 2002; Sultan, 2002). Worthy et al. (2004) also found that young consumers who were born between 1965 and 1980 (i.e., Generation X) made more purchases using the Internet than older consumers (i.e., Baby Boomers, Mature Market).

According to the Greenfield Online Survey conducted by Greenfield Online, Inc. (2000), apparel was one of the three main categories that online users were most likely to purchase. In

the United States (U.S.), apparel sales through Internet shopping doubled from 2.9 billion dollars in 1999 to 5.9 billion dollars in 2000, according to the Retail Apparel Sales Statistics and Trends (2002). Among Internet users, 60% of consumers reported shopping online for apparel products and 56% of them have purchased at least one apparel item from the Internet. Among online apparel purchasers, about 40% of them expected to repeat their apparel purchase via the Internet in the near future (CyberAtlas Trends & Statistics, 2000). Consistent with the results of Greenfield Online Inc. (2000), another source also showed that apparel products were the third largest e-commerce category with 10% of market share in 2001 (Market Wire, 2002).

Some problems exist in apparel Internet shopping due to unique characteristics of apparel; for example, fashion products such as apparel and perfume can be considered as a greater risk than books and software because size or material inspection is hard to occur before purchasing in online shopping (Bhatnagar, Misra, & Rao, 2000). Being unable to touch or try on apparel before buying can be a big barrier for the consumers. Questioning accuracy of apparel color on the screen can be another factor for not buying apparel online. Many studies reported that the majority of Internet shoppers (58%-85%) avoided purchasing apparel online because of the inability to see size or appearance, feel the fabric touch, and try on clothing (CyberAtlas Trends & Statistics, 2000; Elliot & Fowell, 2000; Dickson, 2001), and a considerable number of Internet shoppers (30 %) did not purchase apparel online because the color of the product was in question (Sonnetech, Inc., 1999). A similar conclusion was also found in Korean users of the internet that they would only purchase online for the items such as casual clothing and fashion goods that did not focus much on fit and styles (Lee & Hong, 1999). To overcome the problem of not being able to feel and touch the apparel product online, Then and Delong (1999) suggested the use of a 3D presentation (i.e., smart card) that contains specific information about consumers' body shape that allows consumers to virtually try on garments. Several apparel websites such as Glamour <glamour.com>, The Home Shopping Network <hsn.com>, and Le Redoute <leredoute.com> are now using "My Virtual Model" from the website <myvirtualmodel.com> that allows consumers to try on selected apparel products virtually. Kim et al. (2006) suggested that efficiency (i.e., ease of navigation), fulfillment (i.e., ability to fulfill orders), system availability (i.e., system compatibility), privacy (i.e., providing information about privacy and security), responsiveness (i.e., return/exchange policy), contact (i.e., prompt response from a company and a reasonable solution), personalization (i.e., gift cards and gift wrapping service),

information (i.e., information about the company), and graphic style (i.e., zoom functions and close-ups) are the main online service attributes that current apparel websites need to improve in the future to facilitate online apparel shopping decisions..

Lee and Johnson (2002) found that Internet apparel buyers were more likely to be female shoppers who had high incomes, and more than 50% of them were ages from 21 to 30. Internet apparel buyers browsed apparel websites more frequently than non-buyers and perceived Internet shopping as safer than the non-buyers. They agreed more on releasing credit card information and felt better about customer service from online retailers. Consistently, Lee and Hong (1999) also found that Korean users of the internet were young and paid their products with credit card. Yoh (1999) found that younger consumers in the United States with higher income were more likely to have positive attitude toward Internet apparel shopping and had greater purchase intentions for Internet apparel shopping. Silverman (2000) predicted that young consumers between age 16 and 22 are becoming the Internet's hottest market. The author reported that young consumers of this age spent an average range of 10 hours a week online and 24% of them purchased products online, whereas adult consumers spent only seven hours a week online and made 3.0% of purchase online in 1999. These young consumers enjoyed buying apparel products online, and 29% of them spent an average of $400 per year for buying apparel using the Internet.

Website Attributes

In traditional offline store settings, physical store attributes are the main characteristics that draw consumers into the store and affect their purchases (Scott, 1985). Similar with the way that offline retail stores attract consumers, website attributes play an important role in attracting consumers to online stores (Seock, 2003). Several researchers investigating how consumers reacted to and evaluated the websites found that consumers would evaluate website attributes during their online shopping, and website attributes played a crucial role in deciding their future purchase decisions (Geissler, 2001; Jarvenpaa & Todd, 1997; Swaminathan, Lepkowska-White, & Rao, 1999). Website attributes such as convenience, product information, search capabilities, and price comparisons were often studied as major characteristics for influencing online purchases (Zellweger, 1997). Lohse and Spiller (1998) proposed a detailed list of important attributes of website that can determine consumers' online choice behavior and sales: they are

merchandise (e.g., assortment, variety, quality, price, and guarantees), promotion (e.g., sales, special promotions, and advertising), service (e.g., general levels of service, credit, and payment policies), convenience (e.g., store organization and layout), checkout (e.g., availability of shopping card and ease of checkout process), and store navigation (e.g., search functions and use of menus). Elliot and Fowell (2000) found that 42% of dissatisfied Internet shoppers complained of difficulties with product comparisons and site navigation. Swaminathan et al. (1999) examined the factors that influence purchasing behavior by measuring the total amount of money spent online in the last six months and the frequency of purchase through the website. The authors concluded that four website attributes influenced consumers' purchase decisions, which were convenience of services (i.e., placing and canceling orders, contacting retailers), reliability, perceived price competitiveness, and ease of access to information. Lohse and Spiller (1998) also examined the relationship between website attributes and monthly sales, and the results indicated that product lists, the number of hyperlinks to other websites, hours of promotion, and consumer service feedback were the attributes that influenced monthly sales. Related to consumers' satisfaction, Koivumaki (2001) found that clarity of the interface, usefulness of the website, interactivity, ease of navigation, selection availability, product presentation, ease of use, and convenience of shopping had a positive relationship with consumer satisfaction. In the study of Szymanski and Hise (2000), online shopping convenience had the most impact on consumers' satisfaction. Regarding apparel websites, low price, recommendations from friends, online promotions, radio or television commercials, and print advertisements or billboards featuring the website were found to be the factors in deciding which website to visit (Web Retailers' Brand Recognition, 1999). Seock (2003) examined website attributes that young consumers favored. Results showed that the young consumers perceived their favorite apparel websites as containing three website attributes that were significantly better than the other websites. They were: sufficient product information, easy navigation, and good customer service. Then and Delong (1999) suggested that product presentation with different angles and picture enlargement in Internet shopping can create a pleasurable shopping experience. Park (2002) proposed that detailed product description, instructions for product usage, product presentation from different angles, images of complete outfit, images of products being used, and images of co-ordinations of different items can help online apparel consumers to make buying decisions. The author

indicated that online apparel websites will succeed only if technology is better developed and delivery improvements are made.

Summary of Literature Review

Since the beginning of impulse buying research in 1940s, researchers had difficulty in reaching an agreeable definition of impulse buying. A definition generally accepted by most researchers now is the definition from Rook and Hoch (1985). They suggested that impulse buying is different from unplanned buying and concluded that "impulse buying occurs when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately. The impulse to buy is hedonically complex and may stimulate emotional conflict. Also, impulse buying is prone to occur with diminished regard for its consequences" (p. 191).

At the beginning stage of impulse buying research (Du Pont Studies, 1945, 1949, 1954, 1959, 1965; Clover, 1950; West, 1951; Bellenger et al., 1978; Kollat & Willet, 1967), impulse buying was considered similar to unplanned buying. Most researchers focused on proving the existence and pervasiveness of impulse buying and classifying products into impulse and non-impulse items to facilitate marketing strategies. Studies were conducted with marketers' interest in mind to benefit companies instead of the consumer. From the 1980s to early 1990s, researchers began to focus on identifying the internal psychological states underlying consumers' impulse buying behaviors in order to solve the definitional problems and marketing strategies (Rook, 1987; Rook & Gardner, 1993; Rook & Hoch, 1985). Starting from 1990s, many studies were conducted to investigate factors that might underlie or cause impulse buying behavior, including the examination of the relationships of affective states, in-store browsing, and impulse buying (Jeon, 1990), the role of information process in impulse buying (Burroughs, 1996), and the normative influences on impulse buying (Rook & Fisher, 1995). Some of the recent studies started to develop models or apply theories to explain impulse buying behavior; for example, Dittmar et al. (1996) developed a theoretical model of impulse buying; Beatty and Ferrell (1998) developed a model for precursors of impulse buying; McGoldrick et al. (1999) developed a model of impulse buying during seasonal sales; Coley (2002) and Kim (2003) proposed a modification of consumer decision making process model for impulse buying.

Previous studies identified numerous factors that were related to impulse buying. The factors can be divided into three categories: individual, situational, and marketing factors. Individual factors were used mostly in the early stage of impulse buying studies, including demographic variables, personality traits, normative influence, hedonic shopping value, individual efforts, and knowledge of shopping environment. Situational factors include time and money availability, mood, and other factors such as the time of shopping (day/evening), nature of shopping trip (major/fill-in), existence of a prepared shopping list, shopping party composition (alone/with adults only/with children), and distance traveled to the store. Marketing factors include type and cost of products, store environment, in-store stimuli, and other marketing factors such as classical conditioning, credit cards, cash machines, and online retailing.

Some positive consequences of impulse buying were also found in previous studies (Gardner & Rook, 1988; Rook & Gardner, 1993; Weinberg & Gottwald, 1982). Many impulse buyers reported feeling better after the impulse buying and exhibited feelings of amusement, delight, enthusiasm, joy, enjoyment of the novelty, and surprise. Breaking out of negative mood state (i.e., mood alteration) was another important reason for the consumers to buy on impulse (Gardner & Rook, 1988). Researchers also agree that impulse buying involves a hedonic or affective factor and that impulse buying satisfies a number of hedonic desires such as fun, excitement, thrill, and being wild (Piron 1991; Rook 1987; Rook & Fisher 1995; Weinberg & Gottwald 1982; Thompson et al., 1990).

In previous studies, an apparel product was often recognized as a product that induced high involvement (Bloch, 1986; Goldsmith & Emmert, 1991; Kapferer & Laurent, 1985/86). Kapferer and Laurent (1985/86) examined consumers' level of involvement among different product categories, and found that product involvement consisted of three dimensions: sign value, pleasure value, and perceived importance. Lee (2000) adapted Kapferer and Laurent's (1985/86) framework of product involvement and refined the measure to specifically fit apparel products. The measure developed by Lee consisted of five dimensions of apparel involvement: sign value, pleasure value, perceived importance, risk importance, and risk probability. Compared to all other products, apparel products had the strongest ability to communicate messages about the individual's identity. Yurchisin and Johnson (2004) examined the variables related to compulsive apparel buying behavior and found a positive relationship between apparel-product involvement and compulsive buying behavior. Because high involvement consumers consider the sign value

of a product very important (Kapferer & Laurent, 1985), and since many apparel products have a high communicative value (Damhorst, 1984-85; Kwon & Farber, 1992), high involvement consumers are more likely to purchase apparel product on impulse.

The Internet has received a great deal of attention in the media and many companies have set up Internet websites (Park & Stoel, 2002). Companies are quickly moving to use the internet as a way of segmenting markets, and reaching consumers across the country and around the world interactively at a reasonable cost (Ainscough & Lucken, 1996). The Internet has been used for various purposes such as interactive communication, information search, and shopping for a product. Some studies investigated the age of Internet users and found that younger consumers were more likely to purchase goods and services on the Internet than older consumers (Donthu, 1999; Lee & Johnson, 2002; Silverman, 2000; Sultan, 2002; Yoh, 1999). In the case of apparel products, several problems in Internet shopping exist due to the unique characteristics of apparel, such as being unable to touch or try on apparel before buying (CyberAtlas Trends & Statistics, 2000), inability to see size or appearance (Dickson, 2001), and inaccuracy of apparel color on the screen (Sonnetech, Inc., 1999).

Similar to traditional offline store settings, where physical store attributes are the main characteristics that draw consumers into the store and affect their purchase (Scott, 1985), website attributes play an important role in attracting consumers to online stores (Seock, 2003). Several researchers investigating how consumers reacted to and evaluated the websites found that consumers would evaluate website attributes during their online shopping, and website attributes played a crucial role in deciding their future purchase decisions (Geissler, 2001; Jarvenpaa & Todd, 1997; Swaminathan et al., 1999). Various website attributes were studied and identified as important factors influencing online apparel purchases (Allen, 2000; Park, 2002; Seock, 2003; Then & Delong, 1999; Web Retailers' Brand Recognition, 1999); for example, Seock (2003) found that young college consumers perceived their favorite apparel websites as containing three website attributes significantly different from other websites. They were: sufficient product information, easy navigation, and good customer service.

CHAPTER THREE
CONCEPTUAL FRAMEWORK

A conceptual model was derived from postulates in previous studies as the framework of this study (See Figure 1). Three factors, apparel involvement, apparel website attributes, and product category/price were proposed to be significantly related to online apparel impulse buying behavior.

Apparel Involvement

-Sign Value

-Perceived Importance

-Pleasure Value

-Risk Importance

-Risk Probability

Apparel Website Attributes

- Website Design

- Product Presentation

- Promotion

- Search Function/Information Provision

Product Category/Price

Impulsiveness of Online Apparel Buying Behavior
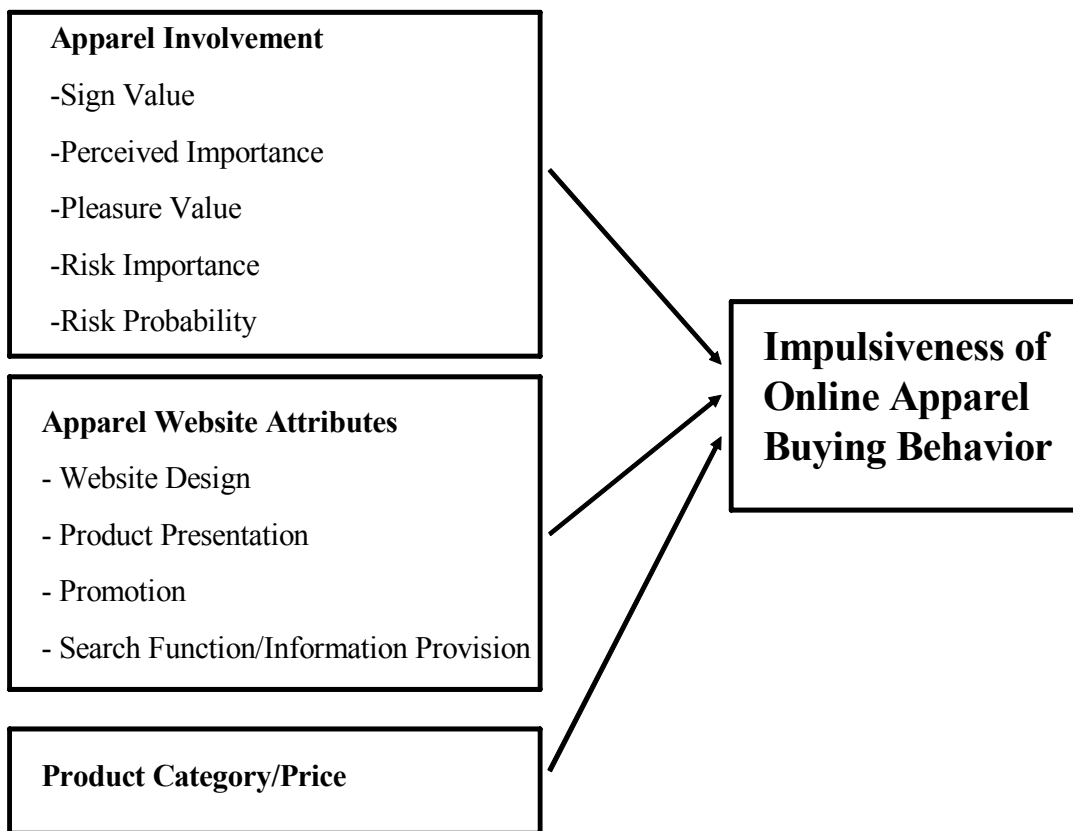
Figure 3.1. Conceptual Framework: Relationships Between Online Apparel Impulse Buying Behavior and Apparel Involvement, Apparel Website Attributes, and Product Category/price.

Apparel Involvement and Impulse Buying

Yurchisin and Johnson (2004) examined the variables related to compulsive apparel buying behavior and found a positive relationship between apparel-product involvement and compulsive buying behavior. Based on the study results, the relationship between apparel involvement and impulsiveness of online apparel buying behavior was proposed in the framework. Kapferer and Laurent (1985/86) examined consumers' level of involvement among 20 product categories, and the product involvement in this study consisted of three dimensions: sign value, pleasure value, and perceived importance. Lee (2000) modified Kapferer and Laurent's framework to develop a measure that specifically fits apparel products. The measure developed by Lee consisted of five dimensions: sign value, pleasure value, perceived importance, risk importance, and risk probability. Based on Lee's study, the five dimensions of apparel involvement were included in the framework to examine if these five dimensions of apparel involvement are possible reasons why individuals purchase apparel products on impulse.

Sign Value in Apparel Involvement and Impulse Buying

The sign value in apparel involvement represents consumers' perception of the product's ability to express one's status personality, or identity, and is defined as "the perceived symbolic value of apparel to consumers" (Kapferer & Laurent, 1985/86, p. 49). Sign value focuses on the meanings of the product and is closely related to consumers' ego perception. It includes consumers' perception of significant others and consumers' self-enhancement resulting from wearing apparel products (Lee, 2000). When Kapferer and Laurent asked the respondents to rate 20 product categories in terms of sign, pleasure, and perceived importance, dress was rated above average on all three values and the highest on sign value. These results indicated that compared to all other 19 product categories, dress had the strongest ability to communicate messages about the individual's identity. Apparel played an important role in the process of convincing others that an individual possesses a particular self-definition or a self-identity. According to Wicklund and Gollwitzer (1982), when an individual buys and wears an apparel product to convince others that he or she has a certain identity, this individual is engaged in a symbolic self-completion process. Dittmar et al. (1996) suggested that symbolic self-completion process may be the driving force for impulse buying because an individual who has a strong need

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to use products as a symbolic tool to persuade others that he or she has a certain identity may be more likely to buy products on impulse. Yurchisin and Johnson (2004) further linked consumers' apparel product involvement to the process of symbolic self-completion, and then to compulsive buying behavior. They suggested that if an individual believes apparel products have communicative ability and can be used as a symbolic tool to reflect his/her actual self-image or enhance his ideal-self image (i.e., high sign value in apparel involvement), it is likely that he/she will be highly involved with apparel products, and thus tend to purchase apparel products on impulse. Based on these studies, a positive relationship between sign value of apparel product involvement and apparel impulse buying behavior was proposed in the framework. Consumers who perceive apparel products as having higher sign value would buy apparel products more on impulse than those who perceive apparel products as having lower sign value.

<center>Perceived Importance in Apparel Involvement and Impulse Buying</center>

The perceived importance dimension of involvement is defined as "the centrality, ego-importance of the product class to the individual" (Kapferer & Laurent, 1985/86, p. 60). The perceived importance in apparel involvement is about what apparel means to the individual and it is closely related to the relevance of the product to the self (Lee, 2000). Although clothing is an important part of daily life, perceived importance in apparel involvement varies between individuals (Kim, Damhorst, & Lee, 2002). The perceived importance in apparel involvement may be manifested by individuals' practices in regard to clothing itself; for example, the amount of time, energy, and money individuals are willing to spend on clothing, the degree to which they use clothing in an experimental manner, and their awareness of fashion and what is new (Gurel & Gurel, 1979). These behaviors related to the perceived importance in apparel involvement are similar to the variable related to impulse buying study proposed by Stern (1962). Stern suggested that various individual efforts (i.e., time efforts, money efforts, physical effort, mental effort) may have significant relationships with impulse buying. Based on these propositions, the perceived importance in apparel involvement was proposed in the framework to be significantly related to apparel impulse buying behavior. Compared with consumers who are not interested in apparel products, those who are interested in apparel products (i.e., high perceived importance in apparel involvement) would buy apparel products more on impulse.

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Pleasure Value in Apparel Involvement and Impulse Buying

Kapferer and Laurent (1985/86) defined the pleasure value as "the hedonic and rewarding value of the product class" (p. 50). The pleasure value reflects the ability of apparel products to elicit pleasure and affect consumers' involvement in clothing (Lee, 2000). Lee proposed that if an apparel product is more aesthetically and recreationally appealing, it is likely to invoke higher levels of involvement. Some researchers investigating impulse buying behavior found that consumers' impulse buying behavior was related to their desire to satisfy hedonic needs (Hirschman, 1992; Holbrook & Hirschman, 1982), and that consumers felt energized or uplifted after impulse shopping (Cobb & Hoyer, 1986; Rook, 1987). Elliott (1994) and Faber and Christenson (1996) suggested that consumers with high pleasure value in apparel involvement are likely to buy on impulse. Based on these study findings and propositions, pleasure value in apparel involvement was proposed in the framework as one of the important precursors of impulse buying for online apparel shopping. Consumers who perceive apparel products as having higher pleasure value would buy apparel products more on impulse than those who perceive apparel products as having lower pleasure value.

Risk Importance in Apparel Involvement and Impulse Buying

Zimbardo (1960) was the first researcher who proposed perceived risk as one of the involvement dimensions. Arora (1982) stated that involvement is present whenever an incorrect decision may occur, and the more a consumer is involved in a product and its expected performance, the more an individual perceives risks. Kapferer and Laurent (1985/86) divided the risk dimension of involvement into two parts: risk importance and risk probability. Risk importance is the negative consequences of a mispurchase and defined as "perceived importance of the negative consequences of mispurchase" (p. 60). According to Rook and Fisher (1995), impulsiveness had a positive relationship with the amount of risk taking. Park (2002) proposed that consumers who are more impulsive may perceive less risk and consider risk as less important when buying apparel through the Internet and may be willing to take risks associated with Internet shopping. Based on these studies, risk importance in apparel involvement was proposed in the framework to be significantly related to online apparel impulse buying behavior. Consumers who perceive apparel products as having lower risk importance would buy apparel

products more on impulse than those who perceive apparel products as having higher risk importance.

<p style="text-align: center;">Risk Probability in Apparel Involvement and Impulse Buying</p>

Risk probability is defined as "subjective probability of making a mispurchase (Kapferer & Laurent, 1985/86, p. 60). Perceived risk and probability of making a mispurchase have been one of the frequent topics of research in the literature of apparel in-home shopping (Kim & Lennon, 2000; Kwon, Paek, & Arzeni, 1991; Simpson & Lakner, 1993). In case of Internet shopping, security issues have challenged consumers' confidence for shopping online (Murphy, 1998). Results from Booker's (1995) study showed that the main reason why the majority of consumers who browsed or searched the Internet but did not make purchases was because of the security issues. For buying apparel products through the Internet, the probability of making a mispurchase (i.e., risk probability) is generally high because size or material inspection is difficult to occur before purchasing online (Bhatnagar, Misra, & Rao, 2000). Many studies reported that the majority of Internet shoppers avoided purchasing apparel online because of the inability to see size or appearance, feel the fabric, and try on clothing (CyberAtlas Trends & Statistics, 2000; Elliot & Fowell, 2000; What Do Women, 2001). Questioning accuracy of apparel color on the screen is another factor for consumers to avoid buying apparel online. Sonnetech, Inc. (1999) reported that about 30% of Internet shoppers did not purchase apparel online because the color of the product was in question. According to Rook and Fisher (1995), impulsiveness has a positive relationship with the amount of risk taking. Park (2002) also proposed that consumers who are more impulsive may perceive less probability of risk when buying apparel through the Internet and may be willing to take risks associated with Internet shopping. Based on these studies and propositions, risk probability in apparel involvement was proposed in the framework to be significantly related to online apparel impulse buying behavior. Consumers who perceive apparel products as having lower risk probability would buy apparel products more on impulse than those who perceive apparel products as having higher risk probability.

Website Attributes and Impulse Buying

Several studies investigated how consumers reacted to Internet websites and found that consumers would evaluate website attributes during their online shopping and that website attributes played a crucial role in deciding their future purchase decisions (Geissler, 2001; Jarvenpaa & Todd, 1997; Seock, 2003; Swaminathan, Lepkowska-White, & Rao, 1999). Geissler (2001) found that website attributes were important factors in attracting consumers and keeping them in the electronic marketplace. As offline store settings where store environment and atmosphere have a significant influence on impulse buying (Eroglu & Machleit, 1993; Mitchell, 1994), website attributes in online retail settings were proposed in the framework to be significantly related to online apparel impulse buying behavior.

<u>Website Design and Impulse Buying</u>

In off-line store settings, atmospheric cues in the retail environment (e.g., sight, sound, smell) were found to be important factors to trigger impulse buying (Eroglu & Machleit, 1993; Mitchell, 1994), and the more the stimuli, the more likely a desire was created, and finally leading to an impulse purchase (Han, 1987; Han et al., 1991). Previous researchers found that graphic style of the site (e.g., animation, print size, layout, and number of photos) played an important role in attracting, sustaining, and retaining consumers at the website (Nitse , Parker, Krumwiede, & Ottaway, 2004; Raney, Arpan, Pashupati, & Brill, 2003). Kim et al. (2006) suggested that graphic style of a website is more critical to online apparel retailers than online retailers of other products because apparel products have to fit properly, blend well with skin tones, perform properly, and for most people, convey fashionability. Kim (2003) found a significant relationship between college students' impulse buying behavior and in-store display. Ko and Rhee (1994) also suggested that product displays can lure consumers into making impulse purchases. In the case of online store settings, website design such as clarity of the interface, uncluttered screen, ease of navigation, selection availability, ease of use, and convenience of shopping (Koivumaki, 2001; Szymanski & Hise, 2000) play an important role in developing online store display, and therefore, may be related to impulse buying behavior. Based

on these findings, website design was proposed in the framework to be significantly related to online apparel impulse buying behavior.

Product Presentation and Impulse Buying

Then and Delong (1999) suggested that product presentation such as showing products from different angles can create a pleasurable shopping experience. Park (2002) proposed that product presentation such as showing images of complete outfits, images of products being used, and images of co-ordinations of different items can help online apparel consumers to make buying decisions. Based on these propositions, product presentation was proposed in the framework to be significantly related to online apparel impulse buying behavior.

Promotion and Impulse Buying

The study by McGoldrick, Betts, and Keeling (1999) showed that 60% of the respondents in the study did more impulse purchase during seasonal sales. Youn and Faber (2000) found that impulse buyers were more reactive to marketing factors such as advertisements and promotional gifts. These findings suggest that a significant relationship may exist between promotion and impulse buying. Based on these findings, promotion was proposed in the framework to be significantly related to online apparel impulse buying behavior.

Search Function/Information Provision and Impulse Buying

Browsing is "the in-store examination of a retailer's merchandise for recreational and informational purposes without an immediate intent to buy" (Bloch, Ridgway, & Nelson, 1991, p. 14). Kim (2003) found that as consumers browsed longer, they were likely to encounter more stimuli and thus increased the possibility of impulse buying behavior. Consistently, Jarboe and McDaniel (1987) also found that consumers who browsed more did more impulse buying than those who browsed less. In the case of online store settings, providing a good search function may encourage consumers to increase their browsing activities in the website, which may lead to more impulse buying behaviors. Park (2002) proposed that detailed product description can help online apparel consumers to make buying decisions. Seock (2003) found that college student consumers perceived their favorite apparel websites as containing sufficient product/policy

information. Detailed product/policy information may help consumers to make immediate purchase decisions and may facilitate impulse buying. Based on the propositions and findings, search function and information provision on website were proposed in the framework to be significantly related to online apparel impulse buying behavior.

Product Category/Price and Impulse Buying

Many researchers assumed that some types of items are more subject to impulse buying than other types (Bellenger et al. 1978; Clover 1950; Du Pont, 1965; Kollat & Willet, 1967; POPAI, 1963; Prasad, 1975; West 1951; Williams & Dardis, 1972), and therefore, many studies focused on classifying product categories into impulsive or non-impulsive items. According to these studies, many apparel items were purchased on impulse [i.e., women's wear (Clover, 1950; Prasad, 1975, Williams & Dardis, 1972), men's wear (Bellenger et al., 1978; Williams & Dardis, 1972; Prasad, 1975), jewelry (Bellenger et al., 1978; West, 1951), cosmetics (Bellenger et al., 1978; POPAI, 1963; West, 1951)]. Studies also found that the cost of a product was associated with impulse buying behavior. Items that cost less than $25 were more likely to be purchased on impulse than the items that cost more than $25 (Deshpande & Krishnan, 1980). Therefore, low-priced products, such as socks and T-shirts, may be purchased more on impulse than high-priced products such as dresses and suits. Based on the previous studies, product category and price were proposed in the framework to be significantly related to online apparel impulse buying behavior.

CHAPTER FOUR
METHOD

This chapter describes the research method for the study including the sections of research hypotheses, instrument development, subject selection and data collection, and data analysis. The section of research hypotheses states the four proposed hypotheses based on the purpose and the framework of this study. The section of instrument development describes each measure included in the questionnaire and the procedures of pilot testing. The section of data collection addresses the sample selection and procedure for conducting this study. The section of data analysis presents the statistical methods used to analyze the data.

Research Hypotheses

The purpose of this study was to examine the relationships between online apparel impulse buying behavior and apparel involvement, apparel website attributes, and product category/price. According to the purpose of the study, a conceptual framework was developed in chapter three to propose variables that may explain the impulsiveness of online apparel buying behavior. The following four research hypotheses were formulated based on the relationships proposed in the conceptual framework.

H1: **Impulsive and non-impulsive online apparel buyers differ significantly in their apparel involvement.**

Yurchisin and Johnson (2004) found a significant relationship between apparel-product involvement and compulsive buying behavior. Based on their study results, the relationship between apparel involvement and the impulsiveness of online apparel buying behavior was proposed in Hypothesis 1 (H1). Lee (2000) developed a measure of apparel-product involvement, which consisted of five dimensions: sign value, perceived importance, pleasure value, risk

importance, and risk probability. Based on Lee's measure, these five dimensions of apparel involvement were included in H1 and examined in five sub-hypotheses to test if these five dimensions of apparel involvement are possible reasons why individuals purchase apparel products on impulse.

H1a: **Impulsive and non-impulsive online apparel buyers differ significantly in their apparel involvement in terms of the sign value of apparel products. Impulsive online apparel buyers will have a higher degree of apparel involvement in terms of the sign value of apparel products than non-impulsive online apparel buyers.**

The sign value of a product represents consumers' perception of the ability of a product to express one's status, personality, or identity and is defined as "the perceived symbolic value of apparel to consumers" (Kapferer & Laurent, 1985/86, p. 49). In Kapferer and Laurent's study among 19 different products, apparel had the strongest ability to communicate messages about the individual's identity. According to Wicklund and Gollwitzer (1982), when an individual buys and wears an apparel product to convince others that he or she has a certain identity, this individual is engaged in a symbolic self-completion process. Dittmar et al. (1996) suggested that symbolic self-completion process may be the driving force for impulse buying. An individual would buy a product on impulse if the individual has a strong need to use the product as a symbolic tool to persuade others that he or she has a certain identity. Yurchisin and Johnson (2004) suggested that if an individual believes apparel products have communicative ability and can be used as a symbolic tool to reflect his actual self-image or enhance his ideal-self image (i.e., high sign value in apparel involvement), it is likely that he will be highly involved with apparel products, and thus tend to purchase apparel products on impulse. Based on these studies, a positive relationship between sign value of apparel-product involvement and the impulsiveness of apparel buying behavior was proposed in H1a. Respondents who purchased apparel products on impulse were expected to have higher sign value of apparel products than those who did not purchase apparel products on impulse.

H1b: **Impulsive and non-impulsive online apparel buyers differ significantly in their apparel involvement in terms of their perceived importance in apparel**

products. Impulsive online apparel buyers will have a higher degree of apparel involvement in terms of their perceived importance in apparel products than non-impulsive online apparel buyers.

The perceived importance in apparel involvement is explained as what apparel means to the individual and is closely related to the relevance of the product to the self (Lee, 2000). The perceived importance in apparel involvement may be manifested by an individual's practice in regard to clothing itself; for example, the amount of time, energy, and money individuals are willing to spend on clothing and their awareness of fashion and what is new (Gurel & Gurel, 1979). These behaviors related to the perceived importance in apparel involvement are similar to the variable related to impulse buying study proposed by Stern (1962). Stern suggested that various individual efforts (i.e., time effort, money effort, physical effort, mental effort) may have significant relationships with impulse buying. Based on these propositions, the perceived importance in apparel involvement was proposed to be positively related to the impulsiveness of apparel buying behavior in H1c. Compared with respondents who did not purchase apparel products on impulse, those who purchased apparel products on impulse were expected to have higher perceived importance in apparel products.

H1c: Impulsive and non-impulsive online apparel buyers differ significantly in their apparel involvement in terms of the pleasure value of apparel products. Impulsive online apparel buyers will have a higher degree of apparel involvement in terms of the pleasure value of apparel products than non-impulsive online apparel buyers.

The pleasure value reflects the ability of apparel products to elicit pleasure and affects consumers' involvement in clothing (Lee, 2000). Researchers found that consumers' impulse buying behavior was related to their desire to satisfy hedonic needs (Hirschman, 1992; Holbrook & Hirschman, 1982), and that consumers felt energized or uplifted after impulse shopping (Cobb & Hoyer, 1986; Rook, 1987). Elliott (1994) and Faber and Christenson (1996) suggested that consumers with high pleasure value in apparel involvement are likely to do impulse buying. Based on these study findings and propositions, pleasure value in apparel involvement was proposed as having a relationship with impulsiveness of online apparel buying behavior.

Respondents who purchased apparel products on impulse were expected to have higher pleasure value of apparel products than those who did not purchase apparel products on impulse.

H1d: **Impulsive and non-impulsive online apparel buyers differ significantly in their apparel involvement in terms of the risk importance of apparel products. Impulsive online apparel buyers will have a lower degree of apparel involvement in terms of the risk importance of apparel products than non-impulsive online apparel buyers.**

Risk importance is an individual's beliefs regarding the negative consequences associated with a purchase that does not meet expectations (Lee, 2000). According to Rook and Fisher (1995), impulsiveness has a positive relationship with the amount of risk taking. Uncertainty may lead consumers to search for information, to elicit information from others, and to participate more in the decision-making process (Rogers, 1995); therefore, consumers who perceive apparel products as having high risk importance would be less engaged in impulse buying than those who perceive apparel products as having low risk importance. Based on these studies, risk importance in apparel involvement was proposed to be negatively related to the impulsiveness of online apparel buying behavior in H1d. Respondents who purchased apparel products on impulse were expected to perceive apparel products as having lower risk importance than those who did not purchase apparel products on impulse.

H1e: **Impulsive and non-impulsive online apparel buyers differ significantly in their apparel involvement in terms of the risk probability of apparel products. Impulsive online apparel buyers will have a lower degree of apparel involvement in terms of the risk probability of apparel products than non-impulsive online apparel buyers.**

Risk probability is defined as "subjective probability of making a mispurchase" (Kapferer & Laurent, 1985/86, p. 60). According to Rook and Fisher (1995), impulsiveness has a positive relationship with the amount of risk taking. Park (2002) also proposed that consumers who are more impulsive may perceive less probability of risk when buying apparel through the Internet and may be willing to take risks associated with Internet shopping. Based on these studies, risk probability in apparel involvement was proposed to be negatively related to the impulsiveness of

online apparel buying behavior in H1e. Respondents who purchased apparel products on impulse were expected to perceive apparel products as having lower risk probability than those who did not purchase apparel products on impulse.

H2: The evaluation of the attributes of the websites where impulse purchases and non-impulse purchases of apparel products were made would be significantly different.

Several studies found that consumers would evaluate website attributes during their online shopping, and website attributes played a crucial role in formation of their future purchase decisions (Geissler, 2001; Jarvenpaa & Todd, 1997; Seock, 2003; Swaminathan, Lepkowska-White, & Rao, 1999). As offline store settings where store environment and atmosphere have a significant influence on impulse buying (Eroglu & Machleit, 1993; Mitchell, 1994), website attributes in online retail settings were proposed to be significantly related to impulsiveness of online apparel buying behavior in H2. Four dimensions of website attributes that have been significant in previous research were proposed to be related to impulsiveness of online apparel buying behavior: website design, product presentation, promotion, and search function/information provision (Lohse & Spiller, 1998; Park, 2002; Seock, 2003). These four dimensions of apparel website attributes were included in H2 and examined in four sub-hypotheses.

H2a: The design of the websites where impulse purchases and non-impulse purchases of apparel products were made would be significantly different. Websites where impulse purchases were made would have significantly better website design than the websites where non-impulse purchases were made.

Stern (1962) proposed that impulse buying is a response to the consumer's exposure to in-store stimuli or store environments. The more the stimuli, such as music and visual merchandising, served as a shopping aid, the more likely a desire was created, and finally led to an impulse purchase (Han, 1987; Han et al., 1991). Previous studies support Stern's (1962) proposition showing that atmospheric factors in the store environment (i.e., sight, sound, smell) were important factors to trigger impulse buying (Eroglu & Machleit, 1993; Mitchell, 1994). Ko and Rhee (1994) suggested that product display can attract consumers to make impulse purchases. Kim's (2003) study supported this argument, which found a significant relationship

between college students' impulse buying behavior and in-store display. In the case of online store settings, Eroglu, Machleit and Davis (2003) proposed that online store environment influences consumers' emotional and cognitive states, which then result in various shopping outcomes, such as impulse buying. Previous researchers also found that graphic style of the site (e.g., animation, print size, layout, number of photos) played an important role in attracting, sustaining, and retaining consumers at the website (Nitse , Parker, Krumwiede, & Ottaway, 2004; Raney, Arpan, Pashupati, & Brill, 2003). Kim et al. (2006) suggested that graphic style of a website is more critical to online apparel retailers than online retailers of other products because apparel products have to fit properly, blend well with skin tones, perform properly, and for most people, convey fashionability. Based on these findings and propositions, product presentation was proposed to be positively related to the impulsiveness of online apparel buying behavior in H2a.

> **H2b: The product presentation in the websites where impulse purchases and non-impulse purchases of apparel products were made would be significantly different. The product presentation of the websites where impulse purchases were made would be significantly better than the websites where non-impulse purchases were made.**

Then and Delong (1999) and Park (2002) proposed that product presentation from different angles, images of complete outfit, images of products being used, and images of co-ordinations of items can help online apparel consumers to make buying decisions. Based on these findings and propositions, product presentation was proposed to be positively related to the impulsiveness of online apparel buying behavior in H2b.

> **H2c: The promotion provided by the websites where impulse purchases and non-impulse purchases of apparel products were made would be significantly different. The websites where impulse purchases were made would provide a significantly better deal on promotion than the websites where non-impulse purchases were made.**

Regarding studies related to offline store settings, Youn and Faber (2000) found that high impulsive buyers were more reactive to marketing factors such as advertisements and

promotional gifts. McGoldrick, Betts, and Keeling (1999) also found that 60 % of respondents did more impulse purchase during seasonal sales. Based on these findings and propositions, promotion was proposed to be positively related to the impulsiveness of online apparel buying behavior in H2c.

H2d: **The characteristics of search function/information provision would be significantly different between the websites where impulse purchases and where non-impulse purchases of apparel products were made. The websites where impulse purchases were made would provide a significantly better search function/information provision than the websites where non-impulse purchases were made.**

Kim (2003) found that as consumers browsed longer, they were likely to encounter more stimuli that would lead them to increase the possibility of impulse buying behavior. Jarboe and McDaniel (1987) also found that consumers who browsed more did more impulse buying than the non-browsers. In the case of online store settings, the website attributes, such as search function, can encourage consumers to increase their browsing activities, which may lead to more impulse buying behaviors. Park (2002) proposed that detailed online product description can help online apparel consumers to make buying decisions. Detailed product/policy information may help consumers to make immediate purchase decisions. Based on the findings and proposition, search function/information provision of a website was proposed to be positively related to the impulsiveness of online apparel buying behavior in H2d.

H3: **The product categories of impulse purchases and non-impulse purchases will be significantly different.**

    H3a: **Some product categories will be purchased significantly more in impulse purchases than in non-impulse purchases.**

    H3b: **Low-priced apparel items will be purchased significantly more in impulse purchases than in non-impulse purchases.**

In the studies related to offline store settings, many researchers found that some types of items are more subject to impulse buying than other types (Bellenger et al. 1978; Prasad, 1975; West 1951; Williams & Dardis, 1972). Studies also found that the cost of the product was

associated with impulse buying behavior. Items that cost less than $25 were more likely to be purchased on impulse than the items that cost more than $25 (Deshpande & Krishnan, 1980). Therefore, low-priced apparel items may be purchased more on impulse than high-priced apparel items. Based on the previous studies, product categories were proposed to be related to the impulsiveness of online apparel buying behavior in H3.

H4: **Consumers' apparel involvement (i.e., perception of sign value, perceived importance, pleasure value, risk importance, risk probability), website attributes (i.e., website design, product presentation, promotion, search function/information provision), and product price will be significantly related to the impulsiveness of online apparel buying behavior.**

Based on the framework of the study, five dimensions of apparel involvement, four dimensions of website attributes, and product category/price were proposed to be significantly related to the impulsiveness of online apparel buying behavior. To examine which variables played a more important role in the impulsiveness of online apparel buying behavior, multiple regression analysis was used to examine the relationship of all the proposed variables with the impulsiveness of online apparel buying behavior in H4, except product category because product category was not a continuous variable, thus could not be included in multiple regression analysis.

Instrument Development

A structured questionnaire was developed to collect data on the variables in this study, which are apparel involvement, website attributes, product categories/price and impulsiveness of online apparel buying behavior. Online shopping experiences were also measured in order to describe general online apparel shopping behavior of the respondents and to make sure that they really had experience in purchasing apparel online. The operational definition of apparel in this study includes both clothing and accessories. A recall study method was used to measure respondents' impulsiveness of online apparel purchases in accordance with previous studies regarding impulse buying behavior (Clover, 1950; Coley, 2002; Dittmar et al., 1996; Gardner & Rook, 1988; Gerbing, Ahadi, & Patton, 1987; Han et al., 1991; Hausman, 2000; Kim, 2003; Park

& Lennon, 2004; Rook, 1987; Rook & Hoch, 1985; Youn & Faber, 2000; Youn & Faber, 2002; Yurchisin & Johnson, 2004). The memory recall method is often used in impulse buying studies because the condition of impulse buying behavior is difficult to create or manipulate through an experimental design. As Rook (1985) stated, impulse buying is a phenomenon that happens at the spur of the moment, and consumers' feelings of spontaneous urges to buy something are influenced by many atmospheric factors and what is occurring at the time. For this situation, environmental and atmospheric factors such as shopping atmosphere, store clientele, and money availability are difficult to manipulate by an experimental design.

Measure of Online Apparel Shopping Experiences

In the e-mail prior to seeing the questionnaire, the respondents were asked whether they had experiences in purchasing clothing/accessories from an Internet website, in order to select three different survey sites. If the respondents did not have an experience in visiting a website selling apparel items over the past six months, they were categorized as non-apparel website visitors and were asked to click Link 1 to access the questionnaire for non-apparel website visitors (See Appendix B-I and Appendix C-I). The questionnaire for non-apparel website visitors included measures of general impulsiveness, apparel involvement, and online experience. For online experience, the respondents were asked how often they visited clothing/accessories websites over the past six months to make sure that they truly did not visit a website that sold clothing/accessories in the past six months. They were also asked to indicate the reasons why they did not visit an apparel website over the past six months. If the respondents had an experience in purchasing clothing/accessories online, they were categorized as online apparel buyers and were asked to click Link 2 to access the questionnaire for online apparel buyers (See Appendix C-II). The questionnaire for online apparel buyers included measures of impulsiveness in general, apparel involvement, online shopping experience, impulsiveness of the last purchase, product and price information about the clothing/accessories they purchased, and website evaluation. For online shopping experiences with clothing/accessory products, the respondents were asked how often they visited clothing/accessories websites over the past six months, how many clothing/accessories they purchased over the past six months, when they made their last purchase of clothing/accessories online, what made them visit the website where the last clothing/accessory purchase was made, and what type of clothing/accessories they purchased

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online. In this last question, the respondents were asked to indicate all the clothing/accessory categories they purchased and then select one item from the list to answer the questions regarding the item cost, promotion type, discount percentage. At the end, the respondents were asked whether they had any online experience during which they wanted to buy a clothing/accessory item on impulse but decided not to purchase. If they did, they were asked the reasons for not purchasing. If the respondents had an experience in visiting a website selling apparel items but did not have an experience in purchasing clothing/accessories online, they were categorized as non-online apparel buyers and were asked to click Link 3 to access the questionnaire for non-online apparel buyers (See Appendix C-III). The questionnaire for non-online apparel buyers included measures of impulsiveness in general, apparel involvement, online visiting experiences, and evaluation of the clothing/accessories website where they visit most often. For online visiting experiences, the respondents were asked how often they visited clothing/accessories websites over the past six months, what made them visit the website where they visited most often, how they evaluated the website where they visited most often, and whether they had any online experience during which they wanted to buy a clothing/accessory item on impulse but decided not to purchase. If they did, they were asked the reasons why they decided not to purchase the item.

<center>Measure of Apparel Involvement</center>

To measure apparel involvement, 22 items, within five dimensions, were adapted from Lee's (2000) scale, incorporating five dimensions: six items measuring sign value (i.e., the perceived symbolic value of apparel to consumers), four items measuring perceived importance (i.e., the centrality, ego-importance of the product class to the individual), five items measuring pleasure value (i.e., the hedonic and rewarding value of the apparel product), four items measuring risk importance (i.e., an individual's beliefs regarding the negative consequences associated with a purchase that does not meet expectations), and three items measuring risk probability (i.e., an individual's beliefs regarding the likelihood that he or she will make an incorrect purchase decision). Some modifications in wording were made from the original measures of Lee, such as changing clothing to clothing/accessories. The response format was a 5-point Likert type scale, ranging from strongly disagree (1), neither disagree nor agree (3), to

<center>58</center>

strongly agree (5). To reduce the number of items, a pilot test of 74 students was conducted. Based on the factor analysis, five items were removed (See Appendix D, Table 1) and 17 items were included in the final questionnaire (See Appendix C-I, II, and III).

<u>Measure of Website Attributes</u>

Regarding respondents' perception of the websites where their last online apparel purchases occurred, 32 items were used to evaluate the website attributes, which represented four dimensions (i.e., website design, product presentation, promotion, search function/information provision), five items measuring website design, 11 items measuring product presentation, five items measuring promotion, and 11 items measuring search function/information provision. Among the 32 items, 23 items were adapted from previous studies on website attributes (Lohse & Spiller, 1998; Park, 2002; Seock, 2003). Some modifications were made to fit the purpose of this study, such as changing the statements from present tense to past tense to ask respondents' experiences of the website where they made the last online apparel purchases. Another nine items were developed by the researcher, in which two items measured product presentation, five items measured the promotion aspect of website attributes, and two items measured search function/information provision. The two items measuring product presentation were developed to measure the presentation specifically for apparel products (e.g., I could use a virtual model on the website.). The five items measuring promotion was developed because there was no previous study that measured the promotion aspect of website attributes. The two items measuring search function/information provision were developed to focus on the search and information provided specially for apparel products. (e.g., The website had a size chart that helped me to decide the size of the product that I should select.). Website attributes were measured with a 5-point Likert type scale ranging from strongly disagree (1), neither disagree nor agree (3), to strongly agree (5). The factor analysis results from the pilot test were used to reduce the number of the items. Accordingly, 13 items were removed (See Appendix D, Table 1) and 19 items were included in the final questionnaire (See Appendix C-II).

Measure of Online Apparel Shopping Impulsiveness

Two sets of questions were used to measure respondents' degree of impulsiveness. One set of questions measured their impulsiveness when they make online apparel purchases in general, and the other set measured their impulsiveness when they purchased the last apparel item online. The measure of impulsiveness in general was used in analyzing the results of demographic profile, online experiences of the impulse buyer and non-impulse buyer groups, and H1 and the five sub-hypotheses. The measure of impulsiveness when the online buyers purchased the last apparel item was used in analyzing the results of H2 and the four sub-hypotheses and H3 and the two sub-hypotheses. Both sets included similar five statements adapted from previous studies (Chen-Yu & Seock, 2002; Han et al., 1991; Jeon, 1990). Some modifications were made from the original statements by changing the word "store" to "website" and by changing statements specifically to fit clothing/accessories purchases. For the question measuring respondents' impulsiveness of last online apparel purchase, the statements were changed to past tense to reflect the respondents' past experiences. The response format is a 5-point Likert type scale, ranging from strongly disagree (1), neither disagree nor agree (3), to strongly agree (5).

Measure of Demographics

Seven questions were used to measure the demographic characteristics of the respondents (i.e., gender, age, student status, marital status, monthly income from work, total monthly income including work, allowance, and other sources, and average monthly amount spending on clothing/accessories). The questions except for the income and clothing expenditure were adapted from Seock's (2003), which also used online surveys to collect data from college students with age from 18 to 22. The questions related to income and clothing expenditure were developed to examine the difference between impulse buyer and non-impulse buyer groups regarding income and clothing expenditure. The responses were used to describe the general characteristics of the respondents and to screen out responses that did not meet the sample criteria.

Order of Measures in the Questionnaire

Questions in the questionnaire were grouped into five sections. Section 1 measured respondents' impulsiveness of online apparel purchase in general, Section 2 measured respondents' apparel involvement, Section 3 measured respondents' online apparel shopping experiences and the degree of impulsiveness in their last online apparel purchase, Section 4 measured respondents' evaluation of the website attributes where the respondents purchased their last apparel item(s), and Section 5 measured respondents' demographics.

Pilot Testing

Pilot testing of the measurement instruments was conducted to validate the items and the scale because some measurement items from prior studies were modified to fit this study and some items were developed by the researcher. Preliminary questionnaires were first distributed to five faculty members at Virginia Tech in November 2004, who were knowledgeable in marketing, consumer behavior, or had extended experiences in research methods, to gain their feedback regarding the content, layout, wording, and ease of understanding the measurement items. Following the revision using the faculty feedback, the questionnaire was first pilot tested in November 2004 with 46 undergraduate students majoring in the Apparel program at Virginia Tech. They were asked to offer suggestions for improving the proposed scale and to edit the items to enhance clarity, readability, and content adequacy. According to the feedback from the first pilot test, the questionnaire was revised, and changed to an online format and uploaded on the survey website of Virginia Tech. In December 2004, e-mails were sent to 46 Apparel undergraduate students who did not attend the first pilot test. To gain feedback from students of various majors, e-mails were also sent to 51 students in a statistics class with various majors. A total of 97 e-mails were sent out for the second pilot test. In one week, 74 responses were received. Further revision was made based on the feedback received to improve the wording of the items. Factor analysis tests were also conducted to reduce the overall number of items regarding apparel involvement and apparel website attributes. As a result, 36 items were included in the final questionnaire.

Subject Selection and Data Collection

The subjects of this study were college students aged 18 to 22, who had previous experience in buying apparel products online. According to Silverman (2000), young consumers between ages 16 and 22 are becoming the hottest market on the Internet. This market has a potential to increase in the future because the young consumers' buying power is increasing rapidly (Shim & Koh, 1997), and many young consumers are now actively participating in shopping for themselves and their families (Kim, 1993; Stipp, 1993). They spend more time and disposable income for Internet shopping than adults, and clothing is one of the most popular product categories for them to shop online (Forrest Research Inc., 2001; Silverman, 2000). The reason for using college students as the young consumers for this study is because in previous studies, most Internet shoppers were found to be highly educated. Bimber (2000) and Burroughs and Sabherwal (2002) found that education influenced Internet access and consumers' use of the Internet to purchase products and that many consumers who purchased products online (51%) had some college education.

Subjects of this study were selected from the student directories of six universities located at different geographical regions of the United States based on the *Atlas map* (2004) (i.e., New England, Middle Atlantic, South, Midwest, Southwest, West). The Atlas map states that the states within these regions have similar climate, geography, traditions, and history and differ across the regions, thereby, improving the diversity of the population within the sample. Because of the difficulty in obtaining a student directory from every university, convenience sampling method was used to select a university from each region (i.e., New England – University of Rhode Island, Middle Atlantic – Cornell University, South – Virginia Polytechnic Institute and State University, Midwest – Kansas State University, Southwest – University of North Texas, West – Colorado State University). The demographics of these six universities are included in Appendix E.

The systematic cluster sampling method was used to select participants from the student directories of the six universities. Systematic cluster sampling is an organized procedure, selecting a sample from a list containing all the population units. Because systematic cluster sampling is one form of probability sampling techniques, it reduces the bias in the subject selection process. The advantage of using the systematic cluster sampling method is that this method is much simpler than other random selection methods because only the first unit is

picked randomly and the remaining units are picked systematically according to the sampling interval, whereas, other random sampling methods require each unit to be picked randomly with equal probability of being chosen as the study sample (Parasuraman, Grewal, & Krishnan, 2004).

To conduct the systematic cluster sampling, the sample size needed to be determined first. The result of the pilot test showed that 58% of the respondents were online apparel buyers and among the online buyers, those who purchased their last item on impulse were 25%. Seock (2003) also collected data from college students using an online survey and the response rate from online buyers was 6%. According to the above information, in order to get 200 or more responses from impulse online buyers, at least 22,988 students needed to be contacted across the six universities (200 / 58% / 25% / 6% = 22,988). To account for errors in the listing and changes in student information, an extra 10% was added (22,988 + 22,988 x 10% = 25,287). For each university, 4,215 students were first selected from the directories (25,287/ 6 = 4,215). The total sample size was 25,290.

Students on the same page of the directory were considered as one cluster and it was assumed that the number of students on each page was the same. For each university, the starting page for sampling was selected randomly by putting the total number of pages in the Microsoft Excel software program to pick a random number as a starting page. For example, the Microsoft Excel software program selected 7 as the starting page for the telephone directory of University of North Texas and 167 as the starting page for the Cornell University. After the starting page was picked, the number of students on the starting page was counted. For example, for the University of North Texas, there were 220 students on the starting page. To determine which subject to be picked among the 220 students, the Excel software program was used again to select a random number to determine the first student to be selected. In the case of University of North Texas, the number was 87, and therefore, the first subject was selected on page 7, the 87th student on the page.

After the first student was selected, remaining students were selected at a constant interval. The interval was determined by the following formula:

Sampling interval of students selected from the directory

= (the number of students in the starting page X the total number of pages in the directory) / the sample size of each university

Using the University of North Texas as an example again, the number of students in the starting page was 220 and the total number of pages of the directory was 392. The sample size for each university had been determined as above, which was 4,215. According to the formula for the sampling interval, the interval for University of North Texas was 20 (220 x 392 / 4,215 = 20). Therefore, starting from the first subject was selected from the 87th student on page 7, one subject was selected after every 20 students until the total number of 4,215 was reached. Same procedure was repeated for all six universities to get the student samples and associated e-mail addresses for data collection. If students' e-mail addresses were not listed in the directory, the search engine of the university was used to obtain each sample student's e-mail address.

The data was collected using an online survey in July 2005, and e-mail was used to recruit subjects and post the survey links to the sample students. Before the e-mail was sent to the sample students, permission for research involving human subjects was obtained from the Institutional Review Board of Virginia Tech. The initial e-mail included an explanation about the research and the links to the online questionnaire (See Appendix C-I). An incentive for completing the questionnaire was offered. Each respondent who met the criteria was eligible to win a drawing of $200 Amazon gift certificate. The criteria for the drawing was that participants must (a) be age 18 or over, (b) complete all questions in the survey, (c) put their e-mail address at the end of the questionnaire, and (d) have submitted the questionnaire within one week after the questionnaire was sent to them. Four days after the initial e-mail, a follow-up e-mail was sent to encourage those who had not yet completed the survey to fill out and submit the questionnaire soon (See Appendix C-II).

After one month the follow-up e-mail was sent, no more responses were received, and among the responses, only 68 responses were retained from impulse online buyers. Based on the response rate of the first data collection, to recruit approximate 100 impulse online buyers, a total of 37,191 subjects needed to be contacted (25,290 x 100 / 68 = 37,191). Therefore, in August 2006, additional 11,904 students were selected using the same procedure of systematic cluster sampling described as above (37,191 - 25,290 = 11,904). From each university, 1,984 additional students were selected (11,904 / 6 = 1,984). The total number of students from each university was 6,209. The follow-up e-mail was sent out after four days the initial e-mail as the first data collection and the second data collection was finished in one month which was in September 2006. The drawing was held after the data collection of the project was completed and the

announcement of the winner was sent through e-mail to all participants of the drawing. The winner's name was revealed in the e-mail with permission of the winner.

Data Analysis

The data gathered from the online survey was analyzed using the Statistical Package for the Social Sciences (SPSS), version 12.0. The reliability of the measure of variables (i.e., apparel involvement, website attributes, impulsiveness of online apparel buying behavior in general, impulsiveness of online apparel buying behavior in the last purchase) was measured using Cronbach alpha. The data analysis consisted of both descriptive statistics and inference statistics. The descriptive statistics included means, frequencies, and percentiles for obtaining general information of the sample. The inference statistics included factor analysis, Chi-square tests, Multivariate Analysis of Variance (MANOVA), and multiple regression analysis. Factor analysis was used to group the items of apparel involvement and the items of website attributes. Chi-square tests were used to compare the differences between the online apparel buyers, non-online apparel buyers, and non-apparel website visitors in demographics and apparel website visiting experience, compare the differences between male and female online apparel buyers in online purchase experiences, and compared the differences between impulse buyers and non-impulse buyers in demographics, apparel website visiting experiences, and online purchase experiences.

MONOVA was used to test H1, which examined whether impulsive and non-impulsive online apparel buyers differed in their apparel involvement. The dependent variables of H1 were the five dimensions of apparel involvement: sign value, perceived importance, pleasure value, risk importance, and risk probability. The score for each dependent variable was obtained by adding scores of all the items under each dimension and then dividing by the total number of items in each dimension. The independent variable of H1 was the impulse buyer and non-impulse buyer groups, which were categorized by respondents' impulsiveness of online apparel purchases in general. An average for the five items measuring degree of impulsiveness of online apparel purchases in general was calculated. The respondents who had an average score higher than three were categorized as impulse buyers and those who had an average score lower than three were categorized as non-impulse buyers. Respondents who had an average score exactly equal to three were excluded from the analysis. The reason for using three as the criteria for

dividing the impulse and non-impulse groups was because in the scale, three was indicated as neither disagree nor agree with the statement measuring respondents' impulsiveness. An average score of three indicated that the respondent felt neutral regarding the impulsiveness of online apparel purchases in general.

MONOVA was used to test H2, which examined whether the attributes of the websites where impulse purchases and non-impulse purchases of apparel products were made would be significantly different. The dependent variables of H2 were the four dimensions of apparel website attributes: website design, product presentation, promotion, search function/information provision. The independent variable of H2 was the impulse purchase and non-impulse purchase groups, which were categorized by the impulsiveness of the last online apparel purchase. The categorization of the two groups was the same as in H1.

Chi-square tests were used to test the two sub-hypotheses of H3, which examined how product categories differed between impulse purchases and non-impulse purchases. H3a examined whether some product categories were purchased significantly more in impulse purchases than in non-impulse purchases. Respondents were asked to indicate all the clothing/accessory categories that they purchased online last time. The number of purchases in each product category was counted and compared between the impulse purchases and non-impulse purchases. The categorization of impulse purchase group and non-impulse purchase group was the same as the categorization for testing H2. H3b examined whether low-priced product categories were purchased significantly more in impulse purchases than in non-impulse purchases. Products with a price lower than $25 were categorized as low-priced products based on Deshpande and Krishnan's study (1980). The number of products that cost more than $25 and the number of products that cost less than $25 were counted and compared between the impulse purchase group and non-impulse purchase group.

Multiple regression analysis was used to examine H4 and develop a model that may explain the impulsiveness of online apparel buying behavior. The dependent variable was the impulsiveness of the last online apparel purchase. The independent variables were the five dimensions of apparel involvement, the four dimensions of apparel website attributes, and the product price.

CHAPTER FIVE
RESEARCH RESULTS

This chapter presents the results of the data analysis and hypothesis testing in the following orders: (a) return rate of the survey, (b) respondents' demographic profile and online experiences, (c) preliminary analysis of the measured variables and instrument reliability, and (d) results of the hypothesis testing.

Return Rate of the Survey

An e-mail was sent to a systematic sample of 37,191 students at six universities located at different geographical regions of the United States in July 2005 to recruit the participants of this study. The six universities included Colorado State University, Cornell University, Kansas State University, University of North Texas, University of Rhode Island, and Virginia Polytechnic Institute and State University. For each university, 6,209 students were contacted through e-mail. A total of 1,050 surveys were received, resulted in a 2.8 % response rate. Out of 1,050 responses, 433 respondents have purchased clothing/accessories from an apparel website over the past six months (i.e., online apparel buyers), 280 respondents have visited an apparel website but did not purchase anything over the past six months (i.e., non-online apparel buyers), and 337 respondents have never visited an apparel website before (i.e., non-apparel website visitors). Because this research focused on students aged 18 to 22, those who did not meet the age criterion or answered questions inaccurately were dropped from the final data analysis. After the eliminations, a total of 687 responses were retained [i.e., 284 (41.3%) online apparel buyers, 194 (28.2%) non-online apparel buyers, 209 (30.4%) non-apparel website visitors]. Among these 687 respondents, some of them did not answer all the questions; therefore, the number of respondents in each part of analysis may vary.

Comparison of Demographic Profile, Apparel Website Visiting Experience,
and Online Purchase Experiences

The results of respondents' demographic profile and online experience were presented in three sections. The first section showed the results of the comparison of demographic profile and apparel website visiting experience among three types of respondents: the online apparel buyers, non-online apparel buyers, and non-apparel website visitors. The demographic characteristics included respondents' gender, age, student status, marital status, incomes, and clothing expenditure. The second section presented the results of the comparison of online purchase experiences between male and female online apparel buyers. Online experiences included the number of clothing/accessory items purchased online, time of last clothing/accessories online purchase, items purchased in the last online purchase, reasons for visiting the website where the last purchase was made, and reasons for not purchasing on impulse. The third section showed the results of the comparison of the impulse buyers and non-impulse buyers in their demographic characteristics, apparel website visiting experience, and online experiences.

<u>Comparison of Demographic Profile and Apparel Website Visiting Experience Among the Online Apparel Buyers, Non-online apparel buyers, and Non-apparel Website Visitors</u>

The demographic characteristics and online experiences of the online apparel buyers, non-online apparel buyers, and non-apparel website visitors were compared, and discussed in the following two sections: Demographic Profile of Online Apparel Buyers, Non-online Apparel Buyers, and Non-apparel Website Visitors, and Online Experiences of Online Apparel Buyers, Non-online Apparel Buyers, and Non-apparel Website Visitors.

Demographic Profile among the Online Apparel Buyers, Non-online Apparel Buyers, and Non-Apparel Website Visitors

Among all the respondents, 62.2% were females and 35.8% were males (See Table 5.1). In all three groups (i.e., online apparel buyers, non-online apparel buyers, non-apparel website visitors), there were more female than male respondents. However, the Chi-square results showed a significant difference between the online apparel buyers, non-online apparel buyers,

Table 5.1. Demographic Profile of the Respondents in Online Apparel Buyer, Non-online Apparel Buyer and Non-apparel Website Visitor Groups

Demographics		Online Apparel Buyers N	Online Apparel Buyers %	Non-online Apparel Buyers N	Non-online Apparel Buyers %	Non-apparel Website Visitors N	Non-apparel Website Visitors %	Total N	Total %	Comparison of the Three Groups
Gender	Male	83	29.5	72	37.3	89	42.8	244	35.8	$X^2(2, 682)$ = 9.41*
	Female	198	70.5	121	62.7	119	57.2	438	64.2	
	Total	281	100.0	193	100.0	208	100.0	682	100.0	
Age	18	67	23.6	36	18.6	45	21.5	148	21.5	$X^2(8, 687)$ = 12.02
	19	54	19.0	51	26.3	59	28.2	164	23.9	
	20	64	22.5	35	18.0	32	15.3	131	19.1	
	21	65	22.9	43	22.2	40	19.2	148	21.5	
	22	34	12.0	29	14.9	33	15.8	96	14.0	
	Total	284	100.0	194	100.0	209	100.0	687	100.0	
Student Status	Undergraduate Student	270	95.4	190	97.9	192	93.2	652	95.5	$X^2(2, 683)$ = 5.17
	Graduate Student	13	4.6	4	2.1	14	6.8	31	4.5	
	Total	283	100.0	194	100.0	206	100.0	683	100.0	
Marital Status	Single	283	100.0	191	99.5	202	97.6	676	99.1	
	Married	0	0.0	1	0.5	4	1.9	5	0.7	
	Divorced	0	0.0	0	0.0	0	0.0	0	0.0	
	Separated	0	0.0	0	0.0	1	0.5	1	0.2	
	Total	283	100.0	192	100.0	207	100.0	682	100.0	

*$p < .01$.
*Note: T*he chi-square test was omitted in marital status because many cells had count less than 5.

and non-apparel website visitors in the number of males and female respondents. [$X^2(2, 682)$ = 9.41, $p <.01$]. When the three types of respondents were compared in pairs, the Chi-square showed that online apparel buyers and non-apparel website visitors were significantly different [$X^2(1, 489)$ = 9.20, $p <.01$], indicating that significantly more females were in the online apparel buyer group than the non-apparel website visitor group. Regarding age, the Chi-square tests showed no significant difference among the three types of respondents. For student status, most respondents were undergraduate students (95.5%), and therefore, the Chi-square results did not show any significant difference among the three groups. Almost all the respondents were single and never married (99.1%). The Chi-square test was omitted in marital status because many cells had counts less than five. Respondents' characteristics regarding gender, student status, and marital status in the current study were similar to that of Seock's (2003). To examine college student consumers' retention for apparel websites, Seock used a systematic sampling method and

distributed online surveys to two universities to collect data from college students in ages from 18 to 22. The results showed that about three quarters (74.9%) of the respondents were female, most of the respondents were undergraduate students (98.6%), and all of the students were single (100.0%).

Chi-square results did not show a significant result in monthly income from work among the online apparel buyer, non-online apparel buyer, and non-apparel website visitor groups. A little more than one third of the respondents (37.5%) did not work. Another one third of the respondents (34.9%) earned $1 to $500 monthly from work. Only 16.9% of the respondents earned between $501 to $1000 and 6.7% earned above $1000. Chi-square results showed significant differences across the online apparel buyer, non-online apparel buyer, and non-apparel website visitor groups in total monthly income including income from work, allowance and other sources [$X^2(6, 669) = 21.23$, $p <.01$]. When the three groups of respondents were compared in pairs, the Chi-square showed a significant difference between the online apparel buyers and the non-online apparel buyers [$X^2(3, 462) = 15.18$, $p <.01$], and between the online apparel buyers and the non-apparel website visitors [$X^2(3, 479) = 14.15$, $p <.01$], indicating that the online apparel buyer group had significantly more monthly income from work, allowance, and other sources than the non-online apparel buyer group and the non-apparel website visitors. More online apparel buyers (27.9%) had a total monthly income above $1000 than the non-online apparel buyers (16.3%) and the non-apparel website visitors (16.4%). About 60% of the non-online apparel buyers and the non-apparel website visitors had a total income of $500 or less, while approximately 40% of the online apparel buyers had a total income of $500 or less (See Table 2). These results indicated that online apparel buyers had significantly more total monthly income from work, allowance, and other sources than the non-online apparel buyers and the non-apparel website visitors.

Regarding the average monthly clothing expenditure, the Chi-square results showed a significant difference among online apparel buyers, non-online apparel buyers, and non-apparel website visitors [$X^2 (8, 679) = 54.42$, $p <.001$]. When the three groups were compared in pairs, the Chi-square showed that the online apparel buyer group was significantly different from the non-online apparel buyer group [$X^2(4, 470) = 37.79$, $p <.001$] and the non-apparel website visitor

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Table 5.2. Income and Clothing Expenditure of the Respondents in Online Apparel Buyers, Non-online Apparel Buyers and Non-apparel Website Visitors groups

Income		Online Apparel Buyers		Non-online Apparel Buyers		Non-apparel Website Visitors		Total		Comparison of the Three Groups
		N	%	N	%	N	%	N	%	
Monthly Income from Work	Do not Work	93	34.1	80	41.7	80	38.3	253	37.5	$X^2(8, 674)$ = 8.58
	$1-$500	91	33.3	65	33.8	79	37.8	235	34.9	
	$501-$1000	55	20.1	27	14.1	32	15.3	114	16.9	
	$1001-$1500	23	8.4	13	6.8	9	4.3	45	6.7	
	$1501 and above	11	4.1	7	3.6	9	4.3	27	4.0	
	Total	273	100.0	192	100.0	209	100.0	674	100.0	
Total Monthly Income from Work, Allowance, and Other Sources	$1-$500	115	42.3	114	60.0	121	58.5	350	52.3	$X^2(6, 669)$ = 21.23*
	$501-$1000	81	29.8	45	23.7	52	25.1	178	26.6	
	$1001-$1500	41	15.1	16	8.4	20	9.7	77	11.5	
	$1501 and above	35	12.8	15	7.9	14	6.7	64	9.6	
	Total	272	100.0	190	100.0	207	100.0	669	100.0	
Average Monthly Clothing Expenditure	$1-$25	57	20.4	79	41.4	74	35.4	210	30.9	$X^2(8, 679)$ =54.42**
	$26-$50	75	26.9	59	30.9	56	26.8	190	28.0	
	$51-$75	44	15.8	24	12.6	39	18.7	107	15.8	
	$76-$100	35	12.5	11	5.8	24	11.5	70	10.3	
	$101 and above	68	24.4	18	9.3	16	7.6	102	15.0	
	Total	279	100.0	191	100.0	209	100.0	679	100.0	

*$p < .01$.   **$p < .001$.

group [$X^2(4, 488) = 30.08$, $p <.001$], indicating that the online apparel buyer group spent significantly more monthly clothing expenditure than the non-online apparel buyer group and the non-apparel website visitor group. About a quarter of the online apparel buyers spent monthly clothing expenditure of $101 and above (24.4%), whereas much less non-online apparel buyers (9.3%) and non-apparel website visitors (7.6%) spent such amount of money in clothing. Most non-online apparel buyers and non-apparel website visitors only spent monthly clothing expenditure of $50 or less (72.3% and 62.2%, respectively) (See Table 5.2). These results indicated that online apparel buyers spent significantly more money on purchasing apparel products than the non-online apparel buyers and the non-apparel website visitors.

Apparel Website Visiting Experience of Online Apparel Buyers, Non-online Apparel Buyers, and Non-Apparel Website Visitors

The Chi-square results showed a significant difference between online apparel buyers and non-apparel website visitors in apparel website visiting experience in the past six months [X^2(6, 476) = 78.38, p <.001]. Online apparel buyers visited websites that sold clothing/accessories significantly more frequently than non-online apparel buyers. More than half of online apparel buyers (52.8%) visited apparel websites at least every other week, whereas less than a quarter of non-online apparel buyers (20.3%) visited apparel websites such frequently (See Table 5.3). About half of the non-online apparel buyers (49.3%) visited apparel websites every three to six months or visited the websites so rarely that they could not remember how often they visited, whereas less than a quarter of online apparel buyers (19.2%) visited apparel websites in such low frequency.

Table 5.3. Apparel Website Visiting Experience of Online Apparel Buyers and Non-online Apparel Buyers

Apparel Website Visiting Experience in the Past Six Months	Online Apparel Buyers		Non-online Apparel Buyers		Total		Comparison of the Two Groups
	N	%	N	%	N	%	
Every Week	64	22.7	11	5.1	75	15.8	
Every Other Week	85	30.1	30	15.2	115	24.2	
Every Month	79	28.0	52	26.4	131	27.5	
Every Three Months	25	8.9	35	17.8	60	12.6	X^2(6, 476) = 78.38*
Every Six Months	20	7.1	26	13.2	46	9.7	
Can not Remember	9	3.2	36	18.3	45	9.4	
Others	0	0.0	4	4.0	4	0.8	
Total	282	100.0	194	100.0	476	100.0	

*p < .001.

Comparison of Online Purchase Experiences Between Male and Female Online Apparel Buyers

More than half of online apparel buyers (57.7%) had purchased one to three items and nearly a quarter of them (22.9%) had purchased four to six items through the Internet over the past six months (See Table 5.4). When divided by gender, the Chi-square results did not show any significant difference between male and female respondents in the number of clothing/accessory items purchased online. Regarding the time of the last online

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Table 5.4. Comparison Between Male and Female Online Apparel Buyers in Number of Clothing/Accessory Items Purchased Online over the Past Six Months and Time of the Last Online Clothing/Accessories Purchase

Online Buying Experiences		Male		Female		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
Number of Clothing/Accessory Items Purchased Online	1-3	48	57.8	114	58.2	164	58.1	$X^2(6, 279)$ = 2.07
	4-6	19	22.9	46	23.5	65	23.3	
	7-9	8	9.6	22	11.2	30	10.8	
	10-15	7	8.4	10	5.1	17	6.1	
	16-20	0	0	1	0.5	1	0.4	
	More than 20	1	1.2	2	1.0	3	1.1	
	Can not remember	0	0	1	0.5	1	0.4	
	Total	83	100.0	196	100.0	279	100.0	
The Time of the Last Online Clothing/Accessories Purchase	In the past month	35	42.7	76	38.6	111	39.8	$X^2(3, 279)$ = .953
	1-2 months ago	25	30.5	66	33.5	91	32.6	
	2-3 months ago	14	17.1	30	15.2	44	15.8	
	4-6 months ago	8	9.8	25	12.7	33	11.8	
	Total	82	100.0	197	100.0	279	100.0	

clothing/accessories purchase, more than one third of the online apparel buyers (39.7%) made their last clothing/accessories purchase in the past month and another one third of them (32.6%) made their last purchase between one and two months ago. Because most of the online apparel buyers purchased their last online clothing/accessory item within two months, the memory regarding the purchase was still fresh, reducing the possibility of memory loss. When divided by gender, the Chi-square results did not show any significant difference between male and female respondents in the time of the last online clothing/accessory purchase.

Pearson's correlation analysis was also conducted to examine the relationship between frequency of visiting apparel websites and number of items purchased over the past six months. The results showed that there was a significant positive relationship between frequency of visiting apparel websites and number of items purchased [$r = .255, p < .01$]. When divided by gender, both male and female respondents showed a significant and positive correlation between the number of times that the respondents visited the websites that sold apparel products and the number of apparel items that they purchased online ($r = .353, p < .01; r = .228, p < .01$, respectively). The results indicated that respondents who visited websites that sold clothing/accessories more often purchased more clothing/accessory items online.

Online buyers were asked to indicate all the apparel items that they purchased in the last online purchase. Twenty seven product categories were indicated by the respondents. Among these 27 product categories, nine categories (i.e., cosmetics, hat, hair accessory, watch, socks/stockings, suit, scarves, tie, gloves) were indicated less than 10 times, suggesting that these product categories were not purchased often by online apparel buyers (See Table 5.5). The category that showed the highest frequency was shirt/blouse (27.4%), followed by pants/jeans (21.4%), and T-shirt and shoes (both 19.6%). When divided by gender, the category that showed the highest frequency for male respondents was shoes (27.7%), followed by T-shirt (22.9%), whereas for female respondents, shirt/blouse (30.3%) showed the highest frequency, followed by pants/jeans (23.7%). The calculation of the percentages in Table 5.5 was based on the total number of respondents in each group, instead of the total number of responses. For example, to calculate percentage of shirt/blouse of the male respondents, the number of shirt/blouse purchased by the male respondents was divided by the total number of male respondents (e.g., 17/83 = 20.5%). The reason for using the total number of respondents was to compare the differences between the male and female respondents. The Chi-square results showed that the male respondents purchased significantly more shoes [$X^2(1, 281) = 4.96$, $p < .05$] than the female respondents, whereas the female respondents purchased significantly more underwear [$X^2(1, 281) = 3.66$, $p < .05$], dress/skirt [$X^2(1, 281) = 11.48$, $p < .01$], swimwear [$X^2(1, 281) = 7.03$, $p < .01$], and purse/bag [$X^2(1, 281) = 7.64$, $p < .01$] than the male respondents in their last online purchase. The Chi-square results of belt showed a p value of .08, indicating that the male respondents might have a higher tendency than the female respondents to purchase belt.

Online buyers were also asked to indicate what made them visit the website where they purchased the last clothing/accessory item. Respondents were asked to indicate all the reasons applicable to them. For both male and female respondents, the three most frequently mentioned reasons for visiting the website where the last purchase was made were all the same. They were advertisement via media (Males 19.3%, Females 22.2%), search engines of other websites (Males 20.5%, Females 19.7%), and advertisement/catalog of the website via postal mail (Males 14.5%, Females 19.2%) (See Table 5.6). To compare the differences between the male and female groups, the calculation of the percentages in Table 5.6 was based on the total number of respondents in each group, instead of the total number of responses. The Chi-square results showed no significant difference between male and female respondents, indicating that the

Table 5.5 Comparison Between Male and Female Online Apparel Buyers in Apparel Items Bought in the Last Online Purchase

Product Category	Male (N = 83)		Female (N =198)		Total (N = 281)		Comparison of the Two Groups
	N	%	N	%	N	%	
Shirt/Blouse	17	20.5	60	30.3	77	27.4	$X^2(1, 281) = 2.84$
Pants/Jeans	13	15.7	47	23.7	60	21.4	$X^2(1, 281) = 2.27$
T-Shirt	19	22.9	36	18.2	55	19.6	$X^2(1, 281) = .82$
Shoes	23	27.7	32	16.2	55	19.6	$X^2(1, 281) = 4.96*$
Dress/Skirt	2	2.4	34	17.2	36	12.8	$X^2(1, 281) = 11.48**$
Swimwear	2	2.4	25	12.6	27	9.6	$X^2(1, 281) = 7.03**$
Coat/Jacket	8	9.6	16	8.1	24	8.5	$X^2(1, 281) = 2.01$
Underwear	3	3.6	21	10.6	24	8.5	$X^2(1, 281) = 3.66*$
Purse/Bag	1	1.2	22	11.1	23	8.2	$X^2(1, 281) = 7.64**$
Belt	7	8.4	7	3.5	14	5.0	$X^2(1, 281) = 2.96$
Sweater	3	3.6	13	6.6	16	5.7	$X^2(1, 281) = .95$
Sunglasses	6	7.2	6	3.0	12	4.3	$X^2(1, 281) = 2.52$
Jewelry	2	2.4	8	4.0	10	3.6	$X^2(1, 281) = .45$
Others (i.e., cosmetics, hat, hair accessory, watch, socks/stockings, suit, scarves, tie, gloves)	6	7.2	19	9.6	25	8.9	$X^2(1, 281) = 1.35$

*$p < .05$.   **$p < .01$.
Note: The calculation of the percentages is based on the total number of respondents (N) in the group.

Table 5.6. Comparison Between Male and Female Online Apparel Buyers in Reasons for Visiting the Website Where the Last Purchase was Made

What made you visit the website where you made the last clothing/accessory online purchase?	Male (N = 83)		Female (N =198)		Total (N = 281)		Comparison of the Two Groups
	N	%	N	%	N	%	
Advertisement via Media	16	19.3	44	22.2	60	21.4	$X^2(1, 255) = 0.57$
Search Engines of Other Websites	17	20.5	39	19.7	56	19.9	$X^2(1, 255) = 0.00$
Advertisement/catalog of the Website via Postal Mails	12	14.5	38	19.2	50	17.8	$X^2(1, 255) = 1.27$
E-mail Notification	9	10.8	35	17.7	44	15.7	$X^2(1, 255) = 2.57$
Prior Knowledge of the Site	10	12.0	10	5.1	20	7.1	$X^2(1, 255) = 3.85$
Favorite Retailer Store	1	1.2	9	4.5	10	3.6	$X^2(1, 255) = 2.08$
Not Available in Off-line Stores	3	3.6	7	3.5	10	3.6	$X^2(1, 255) = 0.00$
Word of Mouth	8	9.6	8	4.0	16	5.7	$X^2(1, 255) = 3.03$
Pop-up Advertisement	3	3.6	3	1.5	6	2.1	$X^2(1, 255) = 1.09$
Others	11	13.3	19	9.6	30	10.7	$X^2(1, 255) = 0.59$

Note: The calculation of the percentages is based on the total number of respondents (N) in the group.

reasons for visiting the website where the last purchase was made were not significantly different in gender.

Online buyers were also asked whether they had online experience during which, they wanted to buy a clothing/accessory item on impulse, but decided not to, and if they had such experience, respondents were asked to select all the reasons applicable to them. Most the online apparel buyers (90.9%) answered that they had such experience. When male and female respondents were compared, the Chi-square results showed a significant difference between genders in the answer of "no such experience" [X^2 (1, 281) = 9.38, p <.01]. Significantly more male respondents (15.7%) than the female respondents (6.4%) did not have the experience in which they wanted to buy a clothing/accessory item on impulse, but decided not to. Among the reasons for not purchasing on impulse, "too expensive" was the most frequently mentioned reason for both male and female respondents (See Table 5.7). To compare the differences between the male and female groups, the calculation of the percentages in Table 5.7 was based on the total number of respondents in each group, instead of the total number of responses. Although this reason was pointed out by both genders, the Chi-square result showed that "too expensive" was a more important reason for the female respondents than the male respondents [X^2 (1, 281) = 4.95, p <.05].

Table 5.7. Comparison Between Male and Female Online Apparel Buyers in Reasons for not Purchasing Online on Impulse

Reasons for not Purchasing on Impulse	Male (N = 83)		Female (N= 198)		Total (N=281)		Comparison of the Two Groups
	N	%	N	%	N	%	
The item was too expensive	45	54.2	135	68.2	180	64.1	X^2(1, 281) = 4.95*
Not enough product information	23	27.7	52	26.3	75	26.7	X^2(1, 281) = .06
Did not provide promotion/discount for the item	14	16.9	47	23.7	61	21.7	X^2(1, 281) = 1.62
Did not like the product presentation	9	10.8	23	11.6	32	11.4	X^2(1, 281) = .04
It was difficult to navigate the website	8	9.6	19	9.6	27	9.6	X^2(1, 281) = .99
Did not like the website design	7	8.4	10	5.1	17	6.0	X^2(1, 281) = 1.18
Others	1	1.2	6	3.0	7	2.5	X^2(1, 281) = .80

*p < .05.   **p < .01.
Note: The calculation of the percentages is based on the total number of respondents (N) in the group.

Comparison of Impulse Buyers and Non-impulse Buyers

The impulse buyer and non-impulse buyer groups were categorized based on two types of impulsiveness. The first type was based on online apparel buyers' impulsiveness in general, which was determined by the average score of the five measures of impulsiveness when the respondents made online apparel purchases in general. The second type was based on online apparel buyers' impulsiveness of last purchase, which was determined by the average score of the five measures of impulsiveness when the respondents made their last online apparel purchase. Based on the average score of the five measures of impulsiveness when the respondents made online apparel purchases in general, the online apparel buyers were divided into impulse buyer and non-impulse buyer groups. Based on the average score of the five measures of impulsiveness when the respondents made their last online apparel purchase, the respondents were divided into impulse purchase and non-impulse purchase groups. Following a previous study in impulse shoppers (Chen-Yu & Seock, 2002), the respondents who had an average score higher than three were categorized as impulse buyers or impulse purchase, and those who had an average score lower than three were categorized as non-impulse buyers or non-impulse purchase because on the scale, three indicated neutral in impulsiveness. Respondents who had an average score exactly equal to three were excluded from the analysis. The paired t-test showed that online apparel buyers' impulsiveness in general and their impulsiveness of last purchase were significantly different [t (281) = 5.37, p <.001]. The mean of impulsiveness of last purchase was significantly less than the mean of impulsiveness in general (M = 2.81 and 3.03, respectively). The Chi-square results showed that the two categorizations were significantly different [X^2 (1, 242) = 95.82, p <.001]. The categorization based on online apparel buyers' impulsiveness in general showed that there were 128 online buyers in the impulse buyer group (49.2%) and 132 online buyers in the non-impulse buyer group (50.8%). The categorization based on the impulsiveness of last purchase showed that there were 91 online apparel buyers in the impulse purchase group (34.2%) and 175 online buyers in the non-impulse purchase group (65.8%).

Comparison of Impulse Buyers and Non-impulse Buyers Based on the Impulsiveness in General

The impulse buyer and non-impulse buyer group were compared and the results were presented in the following three sections: Demographic profile of the impulse buyer and non-impulse buyer groups, apparel website visiting experience of the impulse buyer and non-impulse buyer groups, and online purchase experiences of the impulse buyer and non-impulse buyer groups.

Demographic profile of the impulse buyer and non-impulse buyer groups.   The demographic profiles of impulse buyer group and non-impulse buyer group are shown in Table 5.8. More than half of the impulse buyers were female (77.8%), whereas only 22.2% were male. For the non-impulse buyer group, female respondents were also more than male respondents (61.1%, 38.9%, respectively). Although more female than male respondents were in both impulse and non-impulse groups, the Chi-square results showed a significant difference between the two groups in gender [$X^2(1, 279) = 9.18, p < .01$], indicating that the two groups were significantly different in gender. There were significantly more female respondents in the impulse group than in the non-impulse group. Regarding age, student status, and marital status, the Chi-square results did not show any significant difference between the two groups.

The Chi-square results did not show a significant difference between impulse buyer group and non-impulse buyer group in monthly income from work. About one third of the respondents in both groups did not work (36.7% and 31.5%, respectively), and also about one third of the respondents in both groups earned $500 or less (29.9% and 37.1%, respectively) (See Table 5.9). The p value of the Chi-square results for the difference showed that the total monthly income, including work, allowance, and other sources, between the impulse buyer group and non-impulse buyer group was significant at $p = .08$. Although it is not significant at the .05 level, it showed a possible tendency that impulse buyers had a higher total monthly income. About half of the non-impulse buyers had a total monthly income less than $500 (49.6%), while only about one third of the impulse buyers had a monthly income less than $500 (36.7%). For average monthly clothing expenditure, the Chi-square results showed a significant difference between the impulse buyer group and non-impulse buyer group [$X^2(4, 277) = 31.83, p < .001$]. More than one third of impulse buyer group (35.7%) spent more than $100 monthly on purchasing clothing, whereas only 10.6% of non-impulse buyers spent more than $100. This result indicated that the

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Table 5.8. Demographic Profile of Impulse Buyer and Non-impulse Buyer Groups

Demographics		Impulse Buyer Group		Non-Impulse Buyer Group		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
Gender	Male	34	22.2	49	38.9	83	29.7	$X^2(1, 279)$ = 9.18*
	Female	119	77.8	77	61.1	196	70.3	
	Total	153	100.0	126	100.0	279	100.0	
Age	18	37	23.7	29	23.0	66	23.4	$X^2(4, 282)$ = 6.33
	19	36	23.1	18	14.3	54	19.1	
	20	30	19.2	33	26.2	63	22.3	
	21	38	24.4	27	21.4	65	23.0	
	22	15	9.6	19	15.1	34	12.1	
	Total	156	100.0	126	100.0	282	100.0	
Student Status	Undergraduate Student	150	97.4	117	92.9	267	95.4	$X^2(1, 280)$ = 3.23
	Graduate Student	4	2.6	9	7.1	13	4.6	
	Total	154	100.0	126	100.0	280	100.0	
Marital Status	Single	155	100.0	126	100.0	281	100.0	
	Married	0	0.0	0	0.0	0	0.0	
	Divorced	0	0.0	0	0.0	0	0.0	
	Separated	0	0.0	0	0.0	0	0.0	
	Total	155	100.0	126	100.0	281	100.0	

*$p < .01$.
*Note: T*he Chi-square test was omitted in marital status because many cells had count less than 5.

Table 5.9. Income and Clothing Expenditure of the Impulse Buyer and Non-impulse Buyer Groups

Income and Clothing Expenditure		Impulse Buyer Group		Non-Impulse Buyer Group		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
Monthly Income from Work	Do not Work	54	36.7	39	31.5	93	34.3	$X^2(4, 271)$ = 6.14
	$1-$500	44	29.9	46	37.1	90	33.2	
	$501-$1000	31	21.1	23	18.5	54	19.9	
	$1001-$1500	15	10.2	8	6.5	23	8.5	
	$1501 and above	3	2.0	8	6.5	11	4.1	
	Total	147	100.0	124	100.0	271	100.0	
Total Monthly Income from Work, Allowance, and Other Sources	$1-$500	54	36.7	61	49.6	115	42.6	$X^2(3, 270)$ = 6.77
	$501-$1000	43	29.3	36	29.3	79	29.3	
	$1001-$1500	28	19.0	13	10.6	41	15.2	
	$1501 and above	22	15.0	13	10.6	35	13.0	
	Total	147	100.0	123	100.0	270	100.0	
Average Monthly Clothing Expenditure	$1-$25	18	11.7	39	31.7	57	20.6	$X^2(4, 277)$ = 31.83*
	$26-$50	40	26.0	35	28.5	75	27.1	
	$51-$75	24	15.6	18	14.6	42	15.2	
	$76-$100	17	11.0	18	14.6	35	12.6	
	$101 and above	55	35.7	13	10.6	68	24.5	
	Total	154	100.0	123	100.0	277	100.0	

*$p < .001$.

impulse buyer group spent significantly more money on purchasing apparel products than the non-impulse buyer group.

Apparel website visiting experience of the impulse buyer and non-impulse buyer groups. For apparel website visiting experiences in the past six months, the Chi-square results showed a significant difference in the frequency of apparel website visits between the impulse buyer and the non-impulse buyer groups [$X^2(5, 281) = 16.33$, $p < .01$]. More respondents in the impulse buyer group than the non-impulse buyer group visited apparel websites every week (29% and 15.1%, respectively). (See Table 5.10). These results indicated that the impulse buyer group visited websites that sold clothing/accessories more frequently than the non-impulse buyer group.

Online purchase experiences of the impulse buyer and non-impulse buyer groups. For the number of apparel items purchased through the Internet over the past six months, the Chi-square results showed a significant difference between the impulse buyer and non-impulse buyer groups

Table 5.10. Apparel Website Visiting Experiences of Impulse Buyer and Non-impulse Buyer Groups

Apparel Website Visiting Experience over the Past Six Months		Impulse Buyer Group		Non-Impulse Buyer Group		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
How often have you visited websites that sold clothing/accessories over the past six months?	Every week	45	29.0	19	15.1	64	22.8	$X^2(5, 281)$ = 16.33*
	Every other week	48	31.0	37	29.4	85	30.2	
	Every month	43	27.7	35	27.8	78	27.8	
	Every 3 months	11	7.1	14	11.1	25	8.9	
	Every 6 months	6	3.9	14	11.1	20	7.1	
	Can not remember	2	1.3	7	5.6	9	3.2	
	Total	155	100.0	126	100.0	281	100.0	

*$p < .01$.

[$X^2(6, 281) = 15.96$, $p < .05$]. More than two third of the respondents in the non-impulse buyer group (68.3%) had purchased only one to three items through the Internet over the past six months, while close to half of the respondents in the impulse buyer group (48.3%) purchased four to fifteen apparel items online over the past six months (See Table 5.11). The results indicated that the impulse buyer group purchased significantly more apparel items online over the past six months than the non-impulse buyer group. Regarding the time of the last online clothing/accessories purchase, the Chi-square results did not show a significant difference between the impulse buyer and the non-impulse buyer groups.

Impulse and non-impulse buyers' answers to what made them visit the website where they purchased the last clothing/accessory item were examined. The Chi-square results showed no significant difference between the impulse buyer and the non-impulse buyer group (See Table 5.12). To compare the differences between the impulse buyer and the non-impulse buyer groups, the calculation of the percentages in Table 5.12 was based on the total number of respondents in each group, instead of the total number of responses. For both groups, advertisement via media, search engines of other websites, advertisement/catalog of the website via postal mail, and e-mail notification were the top four reasons for the respondents to visit the website.

Impulse buyer group and non-impulse buyer group were compared regarding the reasons for deciding not to buy a clothing/accessory item on impulse. Most impulse buyers (87.2%) and non-impulse buyers (86.2%) did have an experience deciding not to buy an item on impulse. For

Table 5.11. Comparison of Impulse Buyer and Non-impulse Buyer Groups in Number of Clothing/Accessory Items Purchased Online over the Past Six Months and the Time of the Last Clothing/Accessories Purchase

Online Purchase Experiences		Impulse Buyer Group		Non-Impulse Buyer Group		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
Number of Clothing/Accessory Items Purchased Online over the Past six Months	1-3	77	49.7	86	68.3	163	58.0	$X^2(6, 281)$ = 15.96*
	4-6	38	24.5	27	21.4	65	23.1	
	7-9	23	14.8	7	5.6	30	10.7	
	10-15	14	9.0	4	3.2	18	6.4	
	16-20	1	0.6	0	0	1	0.4	
	More than 20	1	0.6	2	1.6	3	1.1	
	Can not remember	1	0.6	0	0	1	0.4	
	Total	155	100.0	126	100.0	281	100.0	
The Time of the Last Online Clothing/Accessories Purchase	In the past month	69	44.5	42	33.3	111	39.5	$X^2(3, 281)$ = 5.71
	1-2 months ago	49	31.6	43	34.1	92	32.7	
	2-3 months ago	24	15.5	21	16.7	45	16.0	
	4-6 months ago	13	8.4	20	15.9	33	11.7	
	Total	155	100.0	126	100.0	281	100.0	

*$p < .05$.

Table 5.12. Comparison of Impulse Buyer and Non-impulse Buyer Groups in Reasons for Visiting the Website Where the Last Purchase was Made

What made you visit the website where you made the last clothing/accessory online purchase?	Impulse Buyer Group (N = 156)		Non-impulse Buyer Group (N = 126)		Total (N = 282)		Comparison of the Two Groups
	N	%	N	%	N	%	
Advertisement via Media	28	17.9	32	25.4	60	21.3	$X^2(1, 282)$ = 2.31
Search Engines of Other Websites	35	22.4	22	17.5	57	20.2	$X^2(1, 282)$ = 1.07
Advertisement/catalog of the Website via Postal Mail	26	16.7	24	19.0	50	17.7	$X^2(1, 282)$ = 0.27
E-mail Notification	26	16.7	18	14.3	44	15.6	$X^2(1, 282)$ = 0.30
Prior Knowledge of the Site	8	5.1	11	8.7	19	6.7	$X^2(1, 282)$ = 1.44
Word of Mouth	9	5.8	7	5.6	16	5.7	$X^2(1, 282)$ = 0.01
Favorite Retailer Store	5	3.2	5	4.0	10	3.5	$X^2(1, 282)$ = 0.12
Not Available in Off-line Stores	5	3.2	4	3.2	9	3.2	$X^2(1, 282)$ = 0.00
Pop-up Advertisement	5	3.2	1	0.8	6	2.1	$X^2(1, 282)$ = 1.95
Others	11	7.1	19	15.1	30	10.6	$X^2(1, 282)$ = 4.73

Note: The calculation of the percentages is based on the total number of respondents (N) in the group.

both impulse and non-impulsive buyer groups, the most frequently mentioned reason was that the item was too expensive (59.6% and 69.8%, respectively) (See Table 5.13). To compare the differences between the impulse buyer and non-impulse buyer groups, the calculation of the percentages in Table 5.13 was based on the total number of respondents in each group, instead of the total number of responses. The Chi-square results showed no significant difference in all the reasons between the two groups at the .05 level. However, the Chi-square results of "The item was too expensive" showed a p value of .08, indicating that too expensive could be a more important reason for the non-impulse buyer group than the impulse buyer group for deciding not to purchase apparel items online on impulse.

Comparison of the Impulse and Non-Impulse Purchase Groups Based on the Impulsiveness of the Last Purchase

The impulse purchase group and non-impulse purchase group were compared and the results were presented in the following three sections: Demographic profile of the impulse purchase and non-impulse purchase groups, Apparel website visiting experience of the impulse purchase and non-impulse purchase groups, and Online purchase experiences of the impulse purchase and non-impulse purchase groups.

Demographic profile of the impulse purchase and non-impulse purchase groups.   The demographic profiles of both impulse purchase group and non-impulse purchase group are shown in Table 5.14. About three quarters of the respondents in the impulse purchase group were female (74.7%), whereas only 25.3% were male. For the non-impulse purchase group, there were more female respondents than male respondents (68.1%, 31.9%, respectively). The Chi-square result did not show a significant difference between the two groups. Regarding age, the Chi-square result showed a significant difference between impulse purchase group and non-impulse purchase group [$X^2(4, 283) = 10.70, p < .05$]. For the non-impulse purchase group, the highest frequency was in the age of 18 (27.0%), while only 16.3% of the respondents in the impulse purchase group were in the age of 18. The highest frequency in the impulse purchase group was in the age of 19 (25.5%), while only 15.7% of the respondents in the non-impulse purchase group were in the age of 19.

The Chi-square results did not show a significant difference between impulse purchase group and non-impulse purchase group in monthly income from work. About one third of the

Table 5.13. Comparison of Impulse Buyer and Non-impulse Buyer Groups in Reasons for not Purchasing on Impulse

Reasons for not Purchasing on Impulse	Impulse Buyer Group (N = 156)		Non-impulse Buyer Group (N = 126)		Total (N = 282)		Comparison of the Two Groups
	N	%	N	%	N	%	
The item was too expensive	93	59.6	88	69.8	181	64.2	$X^2(1, 282) = 3.17$
Not enough product information	41	26.3	33	26.2	74	26.2	$X^2(1, 282) = 0.00$
Did not provide promotion/discount for the item	30	19.2	31	24.6	61	21.6	$X^2(1, 282) = 1.19$
It was difficult to navigate the website	19	12.2	8	6.3	27	9.6	$X^2(1, 282) = 2.74$
Did not like the website design	12	7.7	5	4.0	17	6.0	$X^2(1, 282) = 1.71$
Did not like the product presentation	17	10.9	14	11.1	31	11.0	$X^2(1, 282) = 0.00$
No such experience	20	12.8	19	15.1	39	13.8	$X^2(1, 282) = 0.30$
Others	5	3.2	2	1.6	7	2.5	$X^2(1, 282) = 0.75$

Note: The calculation of the percentages is based on the total number of respondents (N) in the group.

Table 5.14. Demographic Profile of Impulse Purchase and Non-impulse Purchase Groups

Demographics		Impulse Purchase Group		Non-Impulse Purchase Group		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
Gender	Male	24	25.3	59	31.9	83	29.6	$X^2(1, 280)$ = 1.32
	Female	71	74.7	126	68.1	197	70.4	
	Total	95	100.0	185	100.0	280	100.0	
Age	18	16	16.3	50	27.0	66	23.3	$X^2(4, 283)$ = 10.70*
	19	25	25.5	29	15.7	54	19.1	
	20	17	17.4	47	25.4	64	22.6	
	21	24	24.5	41	22.2	65	23.0	
	22	16	16.3	18	9.7	34	12.0	
	Total	98	100.0	185	100.0	283	100.0	
Student Status	Undergraduate Student	93	95.9	176	95.1	269	95.4	$X^2(1, 282)$ = 0.79
	Graduate Student	4	4.1	9	4.9	13	4.6	
	Total	97	100.0	185	100.0	282	100.0	
Marital Status	Single	98	100.0	184	100.0	282	100.0	
	Married	0	0.0	0	0.0	0	0.0	
	Divorced	0	0.0	0	0.0	0	0.0	
	Separated	0	0.0	0	0.0	0	0.0	
	Total	98	100.0	184	100.0	282	100.0	

*$p < .05$.

Note: The chi-square test was omitted in marital status because many cells had count less than 5.

respondents in both groups did not work (32.6% and 35.0%, respectively), and also about one third of the respondents in both groups earned $500 or less (34.8% and 32.2%, respectively) (See Table 5.15). However, the Chi-square results showed that total monthly income, including work, allowance, and other sources, was significantly different between the impulse purchase group and non-impulse purchase group [$X^2(3, 271) = 14.00$, $p <.01$]. For the impulse purchase group, 42.2% of the respondents had a total monthly income more than $1,000, whereas only 21.0% of the respondents in the non-impulse purchase group had a total monthly income of more than $1,000. For average monthly clothing expenditure, the Chi-square results showed a significant difference between the impulse purchase group and non-impulse buyer group [$X^2(4, 278) = 13.06$, $p <.05$]. More than one third of the respondents in the impulse purchase group (36.0%) spent more than $100 monthly on purchasing clothing, whereas only 18.2% of the respondents in the non-impulse purchase group spent more than $100. This result indicated that the impulse purchase group spent significantly more money on purchasing apparel products than the non-impulse purchase group.

Apparel website visiting experience of the impulse purchase and non-impulse purchase groups. For apparel website visiting experiences in the past six months, the Chi-square results showed a significant difference in the frequency of apparel website visits between the impulse purchase and the non-impulse purchase groups [$X^2(5, 281) = 11.67$, $p < .05$]. More than one third of the respondents in the impulse purchase group visited websites that sold clothing/accessories every other week (38.8%), whereas only one quarter of the respondents in the non-impulse purchase group visited the websites such frequently (25.7%) (See Table 5.16). The results indicated that the impulse purchase group visited websites that sold clothing/accessories more frequently than the non-impulse purchase group.

Online purchase experiences of the impulse and non-impulse purchase groups. For the number of apparel items purchased online over the past six months, many respondents in the non-impulse purchase group (70.0%) bought one to three apparel items through the Internet over the past six months, while many respondents in the impulse purchase group (61.3%) bought four to fifteen apparel items online over the past six months (See Table 5.17). The Chi-square results showed a significant difference in the number of clothing/accessory online purchase over the past six months between the impulse purchase and the non-impulse purchase groups [$X^2(6, 281) = 43.19$, $p < .001$]. The result indicated that the impulse purchase group bought significantly more

Table 5.15. Income and Clothing Expenditure of the Impulse Purchase and Non-impulse Purchase Groups

Income and Clothing Expenditure		Impulse Purchase Group		Non-Impulse Purchase Group		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
Monthly Income from Work	Do not Work	30	32.6	63	35.0	93	34.2	$X^2(4, 272)$ = 5.27
	$1-$500	32	34.8	58	32.2	90	33.1	
	$501-$1000	18	19.5	37	20.6	55	20.2	
	$1001-$1500	11	12.0	12	6.7	23	8.5	
	$1501 and above	1	1.1	10	5.5	11	4.0	
	Total	92	100.0	180	100.0	272	100.0	
Total Monthly Income from Work, Allowance, and Other Sources	$1-$500	32	35.1	83	45.9	115	42.3	$X^2(3, 271)$ = 14.0**
	$501-$1000	21	23.1	60	33.1	81	29.8	
	$1001-$1500	22	24.2	19	10.5	41	15.1	
	$1501 and above	16	17.6	19	10.5	35	12.8	
	Total	91	100.0	181	100.0	272	100.0	
Average Monthly Clothing Expenditure	$1-$25	13	13.4	44	24.3	57	20.5	$X^2(4, 278)$ = 13.06*
	$26-$50	25	25.8	49	27.1	74	26.6	
	$51-$75	12	12.4	32	17.7	44	15.8	
	$76-$100	12	12.4	23	12.7	35	12.6	
	$101 and above	35	36.0	33	18.2	68	24.5	
	Total	97	100.0	181	100.0	278	100.0	

*$p < .05$, **$p < .01$.

Table 5.16. Apparel Website Visiting Experiences of Impulse Purchase and Non-impulse Purchase Groups

Apparel Website Visiting Experience over the Past Six Months		Impulse Purchase Group		Non-Impulse Purchase Group		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
How often have you visited websites that sold clothing/accessories over the past six months?	Every week	22	22.5	42	22.9	64	22.8	$X^2(5, 281)$ = 11.67*
	Every other week	38	38.8	47	25.7	85	30.2	
	Every month	28	28.6	51	27.9	79	28.1	
	Every 3 months	7	7.1	17	9.3	24	8.5	
	Every 6 months	2	2.0	18	9.8	20	7.1	
	Can not remember	1	1.0	8	4.4	9	3.2	
	Total	98	100.0	183	100.0	281	100.0	

*$p < .05$.

Table 5.17. Comparison of Impulse Purchase and Non-impulse Purchase Groups in Number of Clothing/Accessory Items Purchased Online over the Past Six Months and the Time of the Last Clothing/Accessories Purchase

Online Purchase Experiences		Impulse Purchase Group		Non-Impulse Purchase Group		Total		Comparison of the Two Groups
		N	%	N	%	N	%	
Number of Clothing/Accessory Items Purchased Online over the Past Six Months	1-3	35	35.7	128	70.0	163	58.0	$X^2(6, 281)$ = 43.19*
	4-6	27	27.6	38	20.8	65	23.1	
	7-9	19	19.4	11	6.0	30	10.7	
	10-15	14	14.3	4	2.2	18	6.4	
	16-20	1	1.0	0	0	1	0.4	
	More than 20	2	2.0	1	0.5	3	1.0	
	Can not remember	0	0.0	1	0.5	1	0.4	
	Total	98	100.0	183	100.0	281	100.0	
The Time of the Last Online Clothing/Accessories Purchase	In the past month	43	43.9	69	37.7	112	39.9	$X^2(3, 281)$ = 1.15
	1-2 months ago	31	31.6	61	33.3	92	32.7	
	2-3 months ago	14	14.3	30	16.4	44	15.7	
	4-6 months ago	10	10.2	23	12.6	33	11.7	
	Total	98	100.0	183	100.0	281	100.0	

*$p < .001$.

items from the websites that sold apparel products over the past six months than the non-impulse purchase group. Regarding the time of the last online clothing/accessories purchase, the Chi-square results did not show a significant difference between the impulse purchase and the non-impulse purchase groups.

The answers to what made the respondents in the impulse purchase group and non-impulse purchase group visit the website where they purchased the last clothing/accessory item were examined. The Chi-square results showed no significant difference between the impulse purchase and the non-impulse purchase group (See Table 5.18). To compare the differences between the impulse purchase and non-impulse purchase groups, the calculation of the percentages in Table 5.18 was based on the total number of respondents in each group, instead of the total number of responses. For both groups, advertisement via media, search engines of other websites, advertisement/catalog of the website via postal mail and e-mail notification were the top four reasons for the respondents to visit the website.

Impulse purchase group and non-impulse purchase group were compared regarding the reasons for deciding not to buy a clothing/accessory item on impulse when they had online

Table 5.18. Comparison of Impulse Purchase and Non-impulse Purchase Groups in Reasons for Visiting the Website Where the Last Purchase was Made

What made you visit the website where you made the last clothing/accessory online purchase?	Impulse Purchase Group (N = 98)		Non-impulse Purchase Group (N = 185)		Total (N = 283)		Comparison of the Two Groups
	N	%	N	%	N	%	
Advertisement via Media	19	19.4	40	21.6	59	20.8	$X^2(1, 283) = 0.19$
Search Engines of Other Websites	14	14.3	43	23.2	57	20.1	$X^2(1, 283) = 3.20$
Advertisement/catalog of the Website via Postal Mail	13	13.3	37	20.0	50	17.7	$X^2(1, 283) = 2.00$
E-mail Notification	20	20.4	25	13.5	45	15.9	$X^2(1, 283) = 2.28$
Prior Knowledge of the Site	6	6.1	14	7.6	20	7.1	$X^2(1, 283) = 0.20$
Word of Mouth	3	3.1	13	7.0	16	5.7	$X^2(1, 283) = 1.89$
Not available in Off-line Stores	1	1.0	9	4.9	10	3.5	$X^2(1, 283) = 2.78$
Favorite Retailer Store	4	4.1	6	3.2	10	3.5	$X^2(1, 283) = 0.13$
Pop-up Advertisement	4	4.1	2	1.1	6	2.1	$X^2(1, 283) = 2.78$
Others	4	4.1	26	14.1	30	10.6	$X^2(1, 283) = 6.72$

Note: The calculation of the percentages is based on the total number of respondents (N) in the group.

experience during which, they wanted to. Most respondents in the impulse purchase group (90.8%) and in the non-impulse purchase group (83.2%) did have an experience deciding not to buy an item on impulse. To compare the differences between the impulse purchase and non-impulse purchase groups, the calculation of the percentages in Table 5.19 was based on the total number of respondents in each group, instead of the total number of responses. Although for both groups, the most frequently mentioned reason was that the item was too expensive (56.1% and 68.1%, respectively) (See Table 5.19), the Chi-square results showed a significant difference between the two groups [X^2 (1, 283) = 3.99, p <.05]. Too expensive was a more important reason for the non-impulse purchase group than the impulse purchase group for deciding not to purchase online on impulse.

Comparison of Results Based on the Impulsiveness in General and the Impulsiveness of Last Purchase

The comparison based on respondents' impulsiveness in general showed significantly more female respondents in the impulse buyer group than in the non-impulse buyer group. The comparison based on respondents' impulsiveness of the last apparel online purchase, however,

Table 5.19. Comparison of Impulse Purchase and Non-impulse Purchase Groups in Reasons for not Purchasing on Impulse

Reasons for not Purchasing on Impulse	Impulse Purchase Group (N = 98)		Non-impulse Purchase Group (N = 185)		Total (N = 283)		Comparison of the Two Groups
	N	%	N	%	N	%	
The item was too expensive	55	56.1	126	68.1	181	64.0	$X^2(1, 283) = 3.99*$
Not enough product information	24	24.5	51	27.6	75	26.5	$X^2(1, 283) = 0.31$
Did not provide promotion/discount for the item	20	20.4	42	22.7	62	21.9	$X^2(1, 283) = 0.20$
It was difficult to navigate the website	12	12.2	15	8.1	27	9.5	$X^2(1, 283) = 1.27$
Did not like the website design	9	9.2	8	4.3	17	6.0	$X^2(1, 283) = 2.68$
Did not like the product presentation	9	9.2	23	12.4	32	11.3	$X^2(1, 283) = 0.67$
No such experience	9	9.2	31	16.8	40	14.1	$X^2(1, 283) = 3.03$
Others	1	1.0	6	3.2	7	2.5	$X^2(1, 283) = 1.31$

*$p < .05$.
Note: The calculation of the percentages is based on the total number of respondents (N) in the group.

showed no significant difference between the impulse purchase group and the non-impulse purchase group. The possible reason might be that more female than male respondents perceived themselves to be an impulse buyer. However, when the actual behaviors were compared (i.e., the last online purchase), the impulsiveness of male and female respondents was not significantly different. The inconsistent results also showed in age. The comparison based on respondents' impulsiveness in general showed no significant difference between the impulse buyer and non-impulse buyer groups. However, the comparison based on respondents' impulsiveness of the last apparel online purchase showed a significant difference between the impulse purchase and non-impulse purchase groups. More respondents aged 19 made their last online purchase on impulse, and more respondents in the age of 18 did not make their last online purchase on impulse. For other results, the findings were all consistent. Both the impulse buyer group and impulse purchase group had significantly higher monthly clothing expenditures, visited apparel websites significantly more frequently, purchased significantly more items online over the past six months, and considered "too expensive" as a less important reason for deciding not to purchase online on impulse than the non-impulse buyer and impulse purchase groups.

Preliminary Analysis of the Measured Variables and Instrument Reliability

Since only online apparel buyers were the focus of the study, 284 online apparel buyers' responses were used in the data analysis for hypothesis testing. Among the 284 respondents, some of them did not answer all the questions. Therefore, the number of respondents in each part of analysis may vary because the statistic computer program, SPSS, automatically eliminated respondents with missing values in the statistical procedure.

Construct of Apparel Involvement

Factor analysis was conducted to determine the constructs of apparel involvement. Before the factor analysis was conducted, three preliminary tests were first performed to determine the appropriateness of factor analysis, which are the anti-image correlation matrix, Bartlett's test of sphericity, and the Kaiser-Meyer-Olkin measure of sampling adequacy (MSA). The anti-image correlation matrix contains the negatives of the partial correlation coefficients, and most of the off-diagonal elements should be small in a good factor model. The results showed that the anti-image correlation matrix contained the negative values of the partial correlations among variables and values were all smaller than 1.00, indicating that true factors existed in the data. Bartlett's test of sphericity is a statistical test of the presence of correlations among variables, which provides the statistical probability that the correlation matrix has significant correlations among at least some variables. Therefore, a significant result in Bartlett's test of sphericity is needed (Hair, Anderson, Tatham, & Black, 1998). For apparel involvement construct, the result of Bartlett's test of sphericity was significant at the .001 level, indicating that the correlation matrix had significant correlations among variables, and thus, the data on apparel involvement were appropriate for factor analysis. The Kaiser-Meyer-Olkin MSA index can range from 0 to 1. It indicates the degree to which each variable in a set is predicted without error by the other variables and tests whether all items are appropriate for use in factor analysis. Therefore, a value of .50 or more from the Kaiser-Meyer-Olkin MSA test indicates that the data is adequate for factor analysis (Hair, Anderson, Tatham, & Black, 1998). The Kaiser-Meyer-Olkin MSA test for the apparel involvement constructs was .88, indicating that the items were appropriate for use in factor analysis.

When factor analysis was conducted, Eigen-values greater than 1.0 and factor loadings of .50 or greater were set as criteria for retaining items. To make sure each item only belongs to one factor, the items that had a factor loading of .50 or greater on more than one factor were removed. As a result, two variables that did not met the criteria were excluded from the analysis (i.e., I enjoy experimenting with colors in clothing/accessories to create the best outfit, Clothing/accessories help me express who I am). After deleting these items, the Cronbach's alpha of the 15 items was .82. According to Malhotra and Lukas (1997), a scale that has an alpha value greater than .60 is considered to have good reliability.

A factor solution of these 15 items, derived by principal component factor analysis with the promax pattern rotation, indicated that 62.7% of the total variance was explained by three apparel involvement factors (Table 5.20). Factor 1, Sign Value/Perceived Importance, consisted of six items, which had a Cronbach's alpha coefficient of .87 and explained 36.5% of the variance in this construct. This factor included items related to respondents' perception of the product's ability to express one's status, personality, or identity, and how important clothing/accessories were to self. The six items in Factor 2, Risk Importance/Probability, had an alpha coefficient of .83 and explained 19.9% of the variance. The factor of Risk Importance/Probability in apparel involvement included items related to respondents' perception of negative consequences of a mispurchase and how important the consequences could be, and whether one thought choosing clothing/accessories was complicated and something to worry about. Factor 3, Pleasure Value, consisted of three items, which had a Cronbach's alpha coefficient of .88 and explained 6.3% of the variance. The factor of the pleasure value in apparel involvement included items related to respondents' perception of whether clothing/accessories have ability to elicit pleasure.

<u>Construct of Apparel Website Attributes</u>

The factor analysis on apparel website attributes was conducted to categorize 19 items. The anti-image correlation matrix contained the negative values of the partial correlations among variables and anti-image correlation values were all smaller than 1.00, implying the existence of true factors in the data. Bartlett's test of sphericity was significant at .001 level and the result of the Kaiser-Meyer-Olkin MSA test was .87, indicating that the correlation matrix had significant

Table 5.20. Factor Analysis Results: Apparel Involvement Constructs

Factor	Item	Factor Loading	Eigen-value	% of Variance	Alpha Coefficient
	Item Total (15 items)			62.7	.82
Sign Value/ Perceived Importance	- My choice of clothing/accessories is relevant to my self-image.	.90			
	- I rate clothing/accessories as being a priority to me	.79			
	- Clothing/accessories I wear allow others to see me as I would like them to see me.	.67			
	- Wearing my best clothing/ accessories increases my self-confidence.	.63	6.21	36.5	.87
	- Clothing/accessories are important to me.	.57			
	- The way I look in my clothing/ accessories is important to me.	.55			
Risk Importance/ Probability	- If, after I have bought clothing/accessories, my choice proved to be poor, I would be annoyed.	.82			
	- If the clothing/accessories I purchase do not have the quality I expect, I am upset.	.80			
	- Choosing clothing/accessories is rather complicated.	.76	3.39	19.9	.83
	- When I buy clothing/accessories, I am not quite sure if I made the right choice or not.	.70			
	- Making a bad choice is something I worry about when shopping for clothing/accessories.	.69			
	- I have a lot to lose if I purchase something I don't like to wear	.64			
Pleasure Value	- Shopping for clothing/accessories is fun.	.88			
	- I enjoy buying clothing/ accessories.	.82	1.06	6.3	.88
	- I have an interest in clothing/ accessories.	.69			

correlations among at least some variables, and thus data on the apparel website attributes were appropriate for factor analysis. The same criteria used in the factor analysis for the apparel involvement construct was also used in the factor analysis for the website attributes; that is, Eigen-values greater than 1.0 and factor loadings of .50 or greater. To make sure each item only belongs to one factor, the items that had a factor loading of .50 or greater on more than one factor were removed. As a result, five items that did not meet the criteria were excluded from the analysis (i.e., I could get to the website quickly, Different screens came up quickly, The website

had a size chart that helped me to decide the size of the product that I should select, The way products were presented was attractive, The website showed product colors that helped me to decide the color of the product that I should select). After deleting these items, the Cronbach's alpha value of the 14 items of apparel website attributes was .82.

The factor solution, derived by principle components factor analysis with the promax rotation, indicated that four apparel website constructs explained 56.5% of the total variance (See Table 5.21). Factor 1, Website Design, consisted of five items related to the general website design quality. This factor had a Cronbach's alpha coefficient of .81 and accounted for the largest percentage of total variance explained (32.2%). Factor 2, Product Presentation, had three items related to the specific methods of presenting products. This factor had a Cronbach's alpha coefficients of .61 and explained 11.4% of the variance. Factor 3, Promotion, consisting of three items related to whether the website provides a good deal on shipping, promotion, and discount. This factor had a Cronbach's alpha coefficient of .75 and explained 7.4% of the variance. The three items in Factor 4, Search Function/Information Provision, had an alpha coefficient of .66 and explained 5.4% of the variance. This factor included items related to search function, product information, and policy for shipping and handling.

Results of the Hypothesis Testing

This section presents and discusses the results of the testing of each main and sub-hypotheses. The hypothesis testing is based on the responses of the 284 survey respondents who were 18 to 22 years old and had experience in purchasing clothing/accessories online in past six months.

<u>Hypotheses 1</u>

Hypotheses 1 (H1) tested the difference in apparel involvement between impulse buyers and non-impulse buyers. Based on the measure of impulsiveness when the respondents make online apparel purchases in general, online buyers were divided into impulse buyer and non-impulse buyer groups. Five sub-hypotheses were under H1, and based on the factor analysis results, H1a and H1b, H1d and H1e were combined in the results.

Table 5.21. Factor Analysis Results: Apparel Website Attribute Constructs

Factor	Item	Factor Loading	Eigen-value	% of Variance	Alpha Coefficient
Item Total (14 items)				56.5	.82
Website Design	- The website showed good quality photos of products.	.78			
	- Products were presented in an organized way.	.70			
	- The images on the website were large enough.	.60	6.12	32.2	.81
	- I could easily find what I wanted.	.59			
	- The website gave detailed written descriptions of products.	.52			
Product Presentation	- The website showed products from various angles.	.76			
	- The website showed images that coordinated different items.	.69			
	- I could use a virtual model on the website (A virtual model is a 3-D model of a customer in order to let the customer virtually try on clothes/ accessories to see how these items may look on the customer's body).	.52	2.17	11.4	.61
Promotion	- The website provided a good deal on shipping.	.87			
	- The website provided a good promotion (e.g., gift, coupon).	.83	1.41	7.4	.75
	- The website provided a good discount.	.54			
Search Function/ Information Provision	- The website had an effective search function.	.77			
	- The website provided detailed policies for shipping and handling of the products.	.67	1.03	5.4	.66
	- The website gave up-to-date information about newly added products.	.53			

> **H1:** **Impulsive and non-impulsive online apparel buyers will differ significantly in their apparel involvement.**

The Multivariate Analysis of Variance (MANOVA) was used to test the main hypothesis H1. Before conducting MANOVA, the homogeneity of the variance-covariance matrices for the dependent variables was tested using Box's Test of Equality of Covariance. If Box's Test of Equality of Covariance is significant, then there may be severe distortion in the tests. In this case, only Pillai's trace criterion should be used (Field, 2002). The result showed that Box's Test of Equality of Covariance was significant ($p < .001$), indicating that the observed covariance matrices were not equal, which violated the assumption of homogeneity of the variance-covariance matrices. Therefore, only Pillai's trace criterion was used.

MANOVA under Pillai's trace criterion revealed that at least one of the mean scores of apparel involvement constructs was significantly different between the impulse buyer and non-impulse buyer groups [F (3, 256) = 22.67, p < .001] (See Table 5.22). Based on this result, H1 was supported. Because H1 was supported, univariate F tests were conducted to test the sub-hypotheses.

Table 5.22. MANOVA Results: Differences Between the Impulse Buyer and Non-impulse Buyer Groups in Three Apparel Involvement Factors

Apparel Involvement Constructs	Impulse Buyer	Non-Impulse Buyer	F-value
	Means		
MANOVA - Pillai's Trace			22.67**
Univariate F tests			
Sign Value/Perceived importance	4.07	3.52	38.73**
Risk Importance/Probability	2.89	3.20	9.00*
Pleasure Value	4.39	3.67	51.45**

*p < .01.   **p < .001.

H1a and H1b:

> **Impulsive and non-impulsive online apparel buyers will differ significantly in their apparel involvement in terms of the sign value/perceived importance of apparel products. Impulsive online apparel buyers will have a higher degree of apparel involvement in terms of the sign value/perceived importance of apparel products than non-impulsive online apparel buyers.**

The univariate F test indicated that the sign value/perceived importance in apparel involvement differed significantly between the impulse buyer and non-impulse buyer groups (F(1, 260) = 38.73, p<.001). The mean of sign value/perceived importance was significantly higher in the impulse buyer group than non-impulse buyer group (M = 4.07, 3.52, respectively). The impulse buyer group perceived apparel products as having higher sign value/perceived importance than the non-impulse buyer group. Based on this result, H1a and H1b were supported.

H1c: Impulsive and non-impulsive online apparel buyers will differ significantly in their apparel involvement in terms of the pleasure

value of apparel products. Impulsive online apparel buyers will have a higher degree of apparel involvement in terms of the pleasure value of apparel products than non-impulsive online apparel buyers.

The univariate F test indicated that the pleasure value in apparel involvement differed significantly between the impulse buyer and non-impulse buyer groups ($F(1, 260) = 51.45$, $p<.001$). The mean of pleasure value was significantly higher in the impulse buyer group than the non-impulse buyer group ($M = 4.39$, 3.67, respectively). The impulse buyer group perceived apparel products as having higher pleasure value than the non-impulse buyer group did. Based on these results, H1c was supported.

H1d and H1e:

Impulsive and non-impulsive online apparel buyers will differ significantly in their apparel involvement in terms of the risk importance/probability of apparel products. Impulsive online apparel buyers will have a lower degree of apparel involvement in terms of the risk importance/probability of apparel products than non-impulsive online apparel buyers.

The univariate F test indicated that the risk importance/probability in apparel involvement differed significantly between the impulse buyer and non-impulse buyer groups ($F(1, 260) = 9.00$, $p<.01$). The mean of risk importance/probability was significantly lower in the impulse buyer group than non-impulse buyer group ($M = 2.89$, 3.20, respectively). The impulse buyer group perceived apparel products as having lower risk importance and risk probability than the non-impulse buyer group. Based on this result, H1d and H1e were supported. Because all five sub-hypotheses were supported, the main hypothesis, H1, was supported.

<u>Hypotheses 2</u>

Hypotheses 2 (H2) tested the difference in the evaluation of apparel website attributes between the impulse purchase group and the non-impulse purchase group. The measure of

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impulsiveness when the online buyers purchased the last apparel item was used in analyzing the results of H2 and the four sub-hypotheses.

H2: **The evaluation of the attributes of the websites where impulse purchases and non-impulse purchases of apparel products were made will be significantly different.**

MANOVA was used to test main hypothesis H2. The result of Box's Test of Equality of Covariance showed that the observed covariance matrices were significantly different ($p < .05$), which violated the assumption of homogeneity of the variance-covariance matrices. Therefore, only Pillai's trace criterion was used.

MANOVA under Pillai's trace criterion revealed that at least one of the mean scores of apparel website attribute constructs was significantly different between the impulse purchase and non-impulse purchase groups [$F (4, 256) = 5.87, p < .001$] (see Table 5.23). Based on the results, H2 was supported. Because H2 was supported, univariate F tests were conducted to test the sub-hypotheses.

Table 5.23. MANOVA Results: Differences Between the Impulse Purchase and Non-impulse Purchase Groups in Four Apparel Website Attribute Factors

Apparel Website Attribute Constructs	Impulse Purchase Group	Non-impulse Purchase Group	F-value
	Means		
MANOVA-Pillai's Trace			5.87**
Univariate F tests			
Website design	4.41	4.18	9.03*
Product Presentation	4.03	3.71	8.21*
Promotion	3.54	3.01	16.93**
Search Function/Information Provision	4.14	3.79	12.80**

*$p < .01$.   **$p < .001$.

H2a: **The design of the websites where impulse purchases and non-impulse purchases of apparel products were made will be significantly different. The websites where impulse purchases were made will have significantly better website design than the websites where non-impulse purchases were made.**

The univariate F test indicated that the evaluation of website design differed significantly between the impulse purchase group and non-impulse purchase group (F (1, 261) = 9.03, p<.01). The mean of website design was significantly higher in the impulse purchase group than the non-impulse purchase group (M = 4.41, 4.18, respectively) (See Table 5.23). The websites where impulse purchases were made were evaluated significantly higher in website design than the websites where non-impulse purchases were made. Based on the result, H2a was supported.

H2b: **The product presentation in the websites where impulse purchases and non-impulse purchases of apparel products were made will be significantly different. The product presentation of the websites where impulse purchases were made will be significantly better than the websites where non-impulse purchases were made.**

The univariate F test indicated that the evaluation of product presentation differed significantly between the impulse purchase group and non-impulse purchase group (F (1, 261) = 8.21, p<.01). The mean of product presentation was significantly higher in the impulse purchase group than in the non-impulse purchase group (M = 4.03, 3.71, respectively) (See Table 5.23). The websites where impulse purchases were made were evaluated significantly higher in product presentation than websites where non-impulse purchases were made. Based on the result, H2b was supported.

H2c: **The promotion provided by the websites where impulse purchases and non-impulse purchases of apparel products were made will be significantly different. The websites where impulse purchases were made will provide a significantly better deal on promotion than the websites where non-impulse purchases were made.**

The univariate F test indicated that the evaluation of promotion differed significantly between the impulse purchase group and non-impulse purchase group (F (1, 261) = 16.93, p<.001). The mean of promotion was significantly higher in the impulse purchase group than in the non-purchase group (M = 3.54, 3.01, respectively) (See Table 5.23). The websites where impulse purchases were made were evaluated significantly higher in promotion than websites where non-impulse purchases were made. Based on the result, H2c was supported.

H2d: **The characteristics of search function/information provision will be significantly different between the websites where impulse purchases and where non-impulse purchases of apparel products were made. The websites where impulse purchases were made will provide a significantly better search function/information provision than the websites where non-impulse purchases were made.**

The univariate F test indicated that the evaluation of search function/information provision differed significantly between the impulse purchase group and non-impulse purchase group (F (1, 261) = 12.80, $p<.001$). The mean of evaluation of search function/information provision was significantly higher in the impulse purchase group than in the non-purchase group (M = 4.14, 3.79, respectively) (See Table 5.23). Based on these results, H2d was supported. The websites where impulse purchases were made provided significantly better product search function and more detailed information provision than those of the websites where the non-impulse purchases were made. Because all four sub-hypotheses were supported, the main hypothesis, H2, was supported.

<u>Hypotheses 3</u>

Hypotheses 3 (H3) tested whether the product categories and price of impulse purchases and non-impulse purchases were different. As in the analysis of H2, based on the five items measuring the impulsiveness when the respondents made their last online apparel purchases, online buyers were divided into impulse purchase and non-impulse purchase groups. There were two sub-hypotheses under H3.

H3: **The product categories of impulse purchases and non-impulse purchases will be significantly different.**

H3a: **Some product categories will be purchased significantly more in impulse purchases than in non-impulse purchases.**

The Chi-square test results showed that there were significant differences between the impulse purchase group and the non-impulse purchase group in the purchase frequency of shirt/blouse [X^2 (1, 283) = 6.87, $p < .01$], shoes [X^2 (1, 283) = 6.45, $p < .05$], and belt [X^2 (1, 283) = 11.19, $p < .05$] (See Table 5.24). Shirt/blouse (36.7%) and belt (9.2%) were bought more frequently by the impulse purchase group whereas shoes (23.8%) were bought more frequently by the non-impulse purchase group. The current study showed that shirt/blouse and belt, product categories that do not require much on fit, were bought more frequently by the impulse purchase group than the non-impulse purchase group, whereas shoes, an item that requires on fit, was bought more frequently by the non-impulse purchase group than the impulse purchase group. Based on these results, H3a was supported.

Table 5.24. Percentage in Each Product Category Purchased by Impulse and Non-impulse Purchase Groups

Group / Product Category	Impulse Purchase Group (N = 98)		Non-Impulse Purchase Group (N = 185)		Total (N = 283)		Comparison of the Two Groups
	n	%	N	%	N	%	
Shirt/Blouse	36	36.7	41	22.2	77	27.2	X^2(1, 283) = 6.87**
Pants/Jeans	19	19.4	40	21.6	59	20.8	X^2(1, 283) = 0.19
T-Shirt	19	19.4	35	18.9	54	19.1	X^2(1, 283) = 0.01
Shoes	11	11.2	44	23.8	55	19.4	X^2(1, 283) = 6.45*
Swimwear	9	9.2	18	9.7	27	9.5	X^2(1, 283) = 0.02
Underwear	11	11.2	14	7.6	25	8.8	X^2(1, 283) = 1.06
Dress/Skirt	5	5.1	19	10.3	24	8.5	X^2(1, 283) = 2.21
Coat/Jacket	5	5.1	19	10.3	24	8.5	X^2(1, 283) = 2.21
Purse/Bag	8	8.2	15	8.1	23	8.1	X^2(1, 283) = 0.00
Sweater	8	8.2	8	4.3	16	5.7	X^2(1, 283) = 1.77
Belt	9	9.2	5	2.7	14	4.9	X^2(1, 283) = 5.72*
Sunglasses	4	4.1	8	4.3	12	4.2	X^2(1, 283) = 0.01
Jewelry	6	6.1	5	2.7	11	3.9	X^2(1, 283) = 2.01
Others (i.e., cosmetics, hat, hair accessory, watch, socks/stockings, suit, scarves, tie, gloves)	5	5.1	19	10.3	24	8.5	X^2(1, 283) = 2.21

*$p < .05$.   **$p < .01$.
Note: The calculation of the percentages is based on the total number (N) of respondents in the group.

H3b: Low-priced apparel items will be purchased significantly more in impulse purchases than in non-impulse purchases.

To test H3b, products with a price lower than $25 were categorized as low-priced products and products with a price higher than $25 were categorized as high-priced products based on the study of Deshpande and Krishnan (1980). The number of purchases in each product category (i.e., low-priced, high priced) was counted and the percentage was compared between the impulse purchase group and non-impulse purchase group. The Chi-square test results showed there was a significant difference between impulse purchase and non-impulse purchase groups in the price of item they bought last time [X^2 (1, 281) = 15.99, $p < .001$] (See Table 5.25). More than half of the respondents in the impulse purchase group (56.7%) bought items that cost less than $25, whereas only one third of the respondents in the non-impulse purchase group (32.1%) bought items that cost less than $25. More than half of the respondents in the non-impulse purchase group (67.9%) bought items that cost more than $25, whereas less than half of the respondents in the impulse purchase group (43.3%) bought items that cost more than $25. The result indicated that items that cost less than $25 were more likely to be purchased by the impulse purchase group than the non-impulse purchase group. Based on these results, H3b was supported. Because both sub-hypotheses were supported, the main hypothesis, H3, was supported.

Table 5.25. Comparison of Impulse Purchase and Non-impulse Purchase Groups in Price of the Item Purchased

Product Price	Impulse Purchase Group		Non-impulse Purchase Group		Total		Comparison of the Two Groups
	n	%	N	%	N	%	
Lower than $25	55	56.7	59	32.1	114	40.6	
Higher than $25	42	43.3	125	67.9	167	59.4	X^2(1, 281) = 15.99*
Total	97	100.0	184	100.0	281	100.0	

*$p < .001$.

<u>Hypotheses 4</u>

Multiple regression analysis was conducted to examine the relationships of apparel involvement, website attributes, product price, and impulsiveness of online apparel buying behavior. The research hypothesis is as follows.

H4: **Respondents' apparel involvement (i.e., perception of sign value/perceived importance, risk importance/probability, pleasure value), website attributes (i.e., website design, product presentation, promotion, search function/information provision), and product price will be significantly related to the impulsiveness of online apparel buying behavior.**

Prior to conducting the multiple regression analysis, regression assumptions were tested. The assumption of the normality of residuals was met based on the residuals' normal distributions in the histogram of residuals. Also, normal probability p-p plot showed that the residuals fell in a fairly straight line, indicating that the normal distribution is a good model for this data set (Malhotra, & Lukas, 1997).

The impulsiveness of last purchase was used as the dependent variable for the multiple regression analysis. The results of stepwise regression analysis indicated that the equation for the impulsiveness of online apparel buying behavior was as follows:

Impulsiveness of online apparel buying behavior

= 1.80 + .491 (sign value/perceived importance)

- .258 (risk importance/probability)

+ .212 (product presentation)
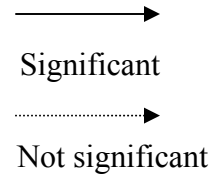
-.539 (product price)

This regression model was significant in explaining impulsiveness of online apparel buying behavior [$F_{(8, 238)} = 23.77$, $p < .001$]. The square of the correlation coefficient is .453 indicating that 45.3% of the variance in the impulsiveness of online apparel buying behavior was explained by this model.

The tests of the relative contributions of the eight independent variables to explain impulsiveness of online apparel buying behavior showed significant *t*-values for four variable (i.e., sign value/perceived importance, risk importance/probability, product presentation, product price) (See Table 5.26). Among these four variables, risk importance/probability and product price were negatively related to the impulsiveness of online apparel buying behavior, indicating that these variables negatively contributed to the impulsiveness of online apparel buying behavior. The lower the score of these two variables, the higher the impulsiveness of online apparel buying behavior. The other two variables (i.e., sign value/perceived importance, product presentation) were positively related to the impulsiveness of online apparel buying behavior, indicating that these variables positively contributed to the impulsiveness of online apparel buying behavior. The Beta results showed that the sign value/perceived importance contributed the most in explaining the impulsiveness of online apparel buying behavior, followed by the product price, and then the risk importance/probability in apparel involvement and product presentation (Beta = .374, -.268, -.217, and .199 respectively). (See Figure 5.1). Based on these results, H4 was partially supported because the regression analysis results showed that only four out of eight independent variables were significantly related to the dependent variable, the impulsiveness of online apparel buying behavior.

Table 5.26. Multiple Regression Analysis Results: Relationships of Apparel Involvement, Website Attributes, Product Price, and Impulsiveness of Online Apparel Buying Behavior

Variables	Standardized Coefficients *Beta*	*t*-value
Sign Value/Perceived Importance	.374	5.18**
Risk Importance/Probability	-.217	-3.77**
Pleasure Value	.071	1.02
Website Design	-.083	-1.31
Product Presentation	.199	-3.16*
Promotion	.034	.57
Search Function/Information Provision	.045	.68
Product Price	-.268	-5.07**

*$p < .01$.   **$p < .001$.

Significant

Not significant

Apparel Involvement
- Sign Value /Perceived Importance
- Risk Importance/ Probability
- Pleasure Value

Website Attributes
- Website Design
- Product Presentation
- Promotion
- Search Function/ Information Provision

Product Price

Impulsiveness of Online Apparel Buying Behavior at last purchase

.374**

-.217**

.071

-.083

.199*

.034

.045

-. 268**
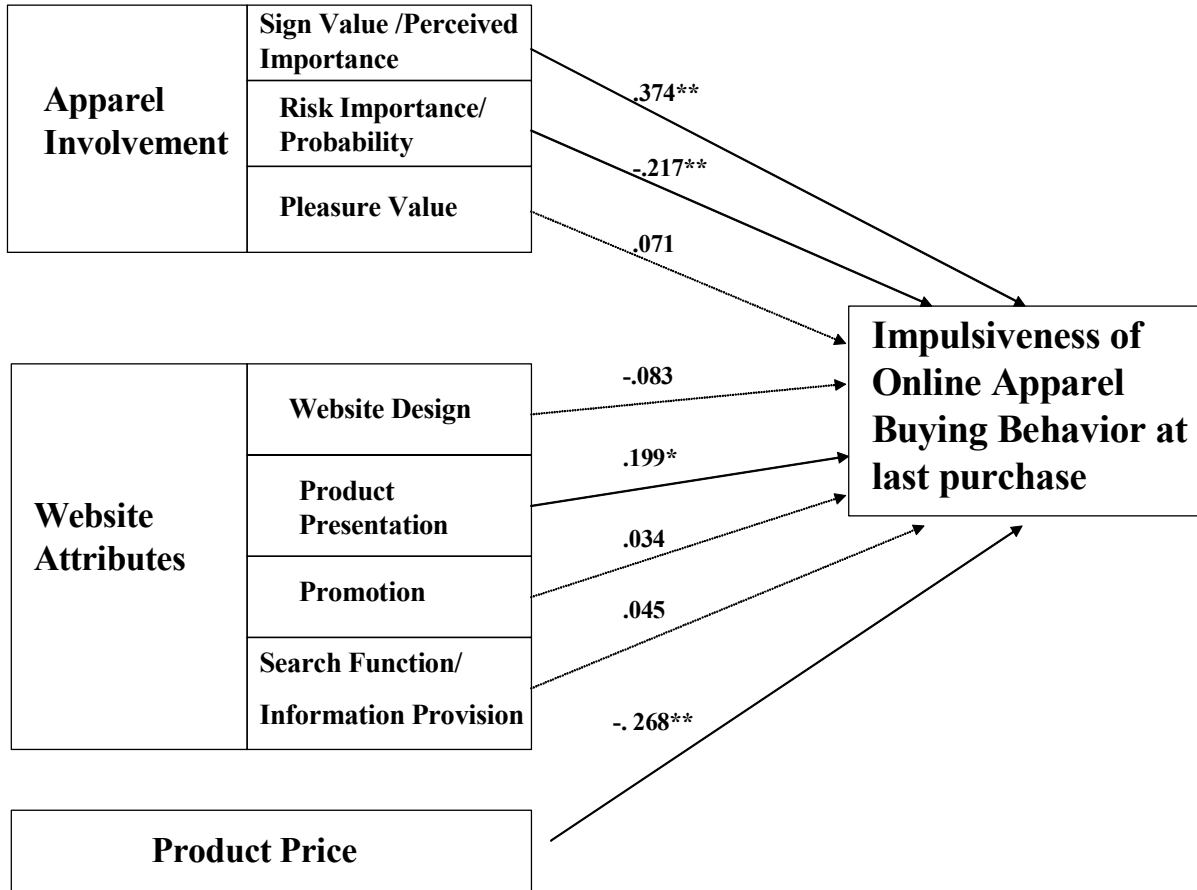
*$p < .01$.   **$p < .001$.
Note. The numbers are the regression standardized coefficients (Beta).

Figure 5.1. Variables Related to the Impulsiveness of Online Apparel Buying Behavior.

CHAPTER SIX
SUMMARY, DISCUSSIONS, IMPLICATIONS, LIMITATIONS, AND RECOMMENTATIONS

This chapter includes three sections. The first section summarizes the study, the second section presents the discussions and implications of the findings, and the third section addresses the limitations of the studies and recommendations for future research.

Summary of the Study

The purpose of this study was to examine the relationships between online apparel impulse buying behavior and apparel involvement, apparel website attributes, and product category/price. A conceptual model was derived from postulates in previous studies as the framework of this study, which includes three dimensions of apparel involvement (i.e., sign value/perceived importance, pleasure value, risk importance/probability), four dimensions of apparel website attributes (i.e., website design, product presentation, promotion, search function/information provision), and product category/price.

The research hypotheses were formulated based on the relationships proposed in the conceptual framework. Hypothesis 1 and the five sub-hypotheses compared the differences between impulse buyer and non-impulse buyer groups in their apparel involvement in terms of sign value/perceived importance, pleasure value, and risk importance/probability. Hypothesis 2 and the four sub-hypotheses compared the differences between impulse buyer and non-impulse buyer groups in their evaluations of website attributes in terms of website design, product presentation, promotion, and search function/information provision. Hypothesis 3 including two sub-hypotheses compared the differences between impulse buyer and non-impulse buyer groups in the product categories and product price that they purchased last time. Finally, hypothesis 4 examined the relationships of apparel involvement, website attributes, and product price with the

impulsiveness of online apparel buying behavior.

A questionnaire was developed to collect data on the variables in this study. Some questions were adapted from previous studies (Lee's, 2000; Lohse & Spiller, 1998; Park, 2002; Seock, 2003) and some questions were developed by the researchers. Subjects of this study were selected from the student directories of six universities located at different geographical regions of the United States based on the Atlas map (2004) (i.e., New England, Middle Atlantic, South, Midwest, Southwest, West), using the systematic cluster sampling method. The data was collected using an online survey. E-mail was used to post the survey link to the sample of 37,590 students, 6,265 students in each university. The respondents returned a total of 1,050 surveys, resulted in a response rate of 2.8%. After eliminating the responses that did not meet the sample criteria or answered questions inaccurately, 687 responses were retained [i.e., 284 (41.3%) online apparel buyers, 194 (28.2%) non-online apparel buyers, 209 (30.4%) non-apparel website visitors].

The results of demographic profile of the three groups (i.e., online apparel buyer, non-online apparel buyer, and non-apparel website visitor) indicated that significantly more females were in the online apparel buyer group than the non-apparel website visitor group, but there was no significant difference in age, student status, and marriage status among the three groups. Most respondents were undergraduate students, and were single and never married. Income level of monthly income from work did not show a significant difference across the three groups. More than one third of the respondents did not work and one third of the respondents earned $500 or less per month from work. Only one fourth of the respondents earned more than $500. For the total monthly incomes from work, allowance, and other sources, online apparel buyer group had significantly more monthly income than the non-online apparel buyer group and the non-apparel website visitor group. Significantly fewer of them had a total monthly income less than $500 and more of them had a total monthly income greater than $1000. Online apparel buyers also spent significantly more money on purchasing apparel products than the other two groups. Significantly more online apparel buyers spent more than $100 on clothing monthly. Most non-online apparel buyers and non-apparel website visitors only spent $50 or less on their clothing.

The results of apparel website visiting experiences in the past six months indicated that online apparel buyers visited websites that sell clothing/accessories more frequently than the non-online apparel buyers. Significantly more online apparel buyers visited apparel websites

every other week, whereas more non-online apparel buyers visited the websites every three to six months.

Regarding online purchase experiences, more than half of the online apparel buyers had purchased one to three items and nearly a quarter of them have purchased four to six items through the Internet over the past six months. Pearson's correlation analysis indicated that both male and female respondents who visited websites that sold clothing/accessories more frequently also purchased more clothing/accessory items. The category that bought most by the online apparel buyers in their last purchase was shirt/blouse, followed by pants/jeans, shoes, and T-shirt. When the data were analyzed by gender, the results indicated that the male respondents purchased significantly more shoes than the female respondents. They also had a higher tendency to purchase belt. The female respondents purchased significantly more underwear, dress/skirt, swimwear, and purse/bag than the male respondents in their last online purchase. Regarding whether they had online experience during which they wanted to buy a clothing/accessory item on impulse, but decided not to, the results indicated that more male respondents answered "no such experience" than the female respondents. Among the reasons for not purchasing on impulse, "too expensive" was a more important reason for the female respondents than the male respondents. Online buyers were also asked to indicate what made them visit the website where they purchased the last clothing/accessory item. For both male and female respondents, the three most frequent mentioned reasons were advertisement via media, search engines of other websites, and advertisement/catalog of the website via postal mail.

Based on the measure of impulsiveness in general, online buyers were divided into impulse buyer and non-impulse buyer groups, and based on the measure of impulsiveness of last online apparel purchases, online buyers were divided into impulse purchase and non-impulse purchase groups. In the comparison between impulse buyer and non-impulse buyer groups, there were significantly more female respondents in the impulse buyer group than in the non-impulse buyer group. However, there was no significant difference between the impulse purchase and non-impulse purchase groups in gender. There was no significant difference between the impulse buyer and non-impulse buyer groups in age. However, the impulse purchase and non-impulse purchase groups were significantly different. More respondents in the impulse purchase group were age 19 than the respondents in the non-impulse purchase group. Almost all respondents were undergraduate students, and were single and never married, and therefore, no significant

difference was found in student status and marital status between the groups. The level of monthly income from work did not show significant difference between the impulse buyer and non-impulse buyer groups, or between the impulse purchase and non-impulse purchase groups. However, the total monthly income, including work, allowance, and other sources, was significantly different between the impulse purchase and non-impulse purchase groups and relatively different between the impulse buyer and non-impulse buyer groups. More respondents in the impulse buyer and purchase groups than the non-impulse buyer and purchase groups had a total monthly income more than $1,000. For the average monthly clothing expenditure, consistently, respondents in the impulse groups spent significantly more money than those in the non-impulse groups. More respondents in the impulse groups spent over $100 on apparel products than the non-impulse groups.

Regarding apparel website visiting experiences in the past six months, the comparison results between the impulse buyer and non-impulse buyer groups, and between the impulse purchase and non-impulse purchase groups were consistent. The impulse groups visited websites that sold clothing/accessories more frequently than the non-impulse groups. More respondents in the impulse groups visited apparel websites every week.

On the subject of online purchase experiences, the result showed that the impulse groups purchased significantly more apparel products online over the past six months than the non-impulse groups. Close to two third of the respondents in the impulse purchase group bought four to fifteen apparel items online, whereas more than two third of the respondents in the non-impulse purchase group had bought only one to three items through the Internet over the past six months. Impulse and non-impulse groups were compared on the answers to what made them visit the website where they purchased the last clothing/accessory item. Consistent results indicated that e-mail notification, advertisement via media, search engines of other websites, and advertisement/catalog of the website via postal mail were the top four reasons for the respondents to visit the website. Respondents were also asked about the reasons why they decided not to buy a clothing/accessory item on impulse. The results indicated that the item was too expensive was a less important reason for the impulse groups than the non-impulse groups.

To test the four proposed hypothesis, the factor analysis was first conducted to determine the constructs of apparel involvement and website attributes. The results showed that apparel involvement consisted three factors (i.e., sign value/perceived importance, pleasure value, risk

importance/probability) and website attributes consisted four factors (i.e., website design, product presentation, promotion, search function/information provision).

Hypotheses 1 (H1) tested if impulsive and non-impulsive online apparel buyers differ significantly in their apparel involvement. Five sub-hypotheses were under H1 to examine the three dimensions of apparel involvement identified in the factor analysis. To examine H1, five measures of the impulsiveness when the respondents made online apparel purchases in general were used to divide respondents into the impulse buyer and non-impulse buyer groups. The results showed that the impulse buyer group perceived the sign value/perceived importance and the pleasure value in apparel involvement significantly higher, and perceived the risk importance/probability in apparel involvement significantly lower than the non-impulse buyer group. Based on the results, the five sub-hypothesis were all supported, and therefore, the main H1 was supported. Impulsive and non-impulsive online apparel buyers differed significantly in their apparel involvement.

Hypotheses 2 (H2) tested if the attributes of the websites where impulse purchases and non-impulse purchases of apparel products were made would be significantly different. Four sub-hypotheses were under H2 to examine the four dimensions of website attributes identified in the factor analysis. To test H2, five measures of the impulsiveness when the online buyers purchased the last apparel item were used to divide the respondents into the impulse purchase and non-impulse purchase groups. The results indicated that the impulse purchase group evaluated the website where they bought the last apparel item significantly better in website design, product presentation, promotion, and search function/information provision than the non-impulse purchase group. Based on the results, the four sub-hypothesis were all supported, and therefore, the main H2 was supported. The attributes of the websites where impulse purchases and non-impulse purchases of apparel products were made were significantly different.

Hypotheses 3 (H3) tested if the product categories purchased by the impulse purchase group and non-impulse purchase group will be significantly different. The results showed that some product categories that the respondents in the impulse purchase group bought were significantly different from those bought by the non-impulse purchase group. Categories such as shirt/blouse and belt were bought more frequently by the respondents in the impulse purchase group whereas shoes were bought more frequently by those in the non-impulse purchase group. The respondents in the impulse purchase group bought more items that cost less than $25 than

those in the non-impulse purchase group. Based on the results, the two sub-hypothesis H3a and H3b were supported, and therefore, the main H3 was supported. The product categories purchased by the impulse purchase group and non-impulse purchase group were significantly different.

Hypotheses 4 (H4) tested if apparel involvement (i.e., sign value/perceived importance, pleasure value, risk importance/probability), website attributes (i.e., website design, product presentation, promotion, search function/information provision), and product price will be significantly related to the impulsiveness of online apparel buying behavior. To examine H4, five measures of impulsiveness when the online buyers purchased the last apparel item were used as the dependent variable. The multiple regression results showed that the sign value/perceived importance in apparel involvement contributed the most in explaining impulsiveness of online apparel buying behavior, followed by product price, risk importance/probability in apparel involvement, and product presentation of website attributes. However, other factors, such as the pleasure value in apparel involvement and website attributes in website design, promotion, and search function/information provision, had no significant linear relationships with the impulsiveness of online apparel buying behavior. Based on the results, H4 was partially supported. The summary of the results of the hypotheses testing is shown in Table 6.1.

Discussions and Implications of the Findings

For many consumers, shopping is a form of entertainment and links closely with leisure activities. Consumers' purchase motivation is not just to buy a needed product, but also to enjoy the buying process (Jeon, 1990). Along with the growing use of credit cards, the tendency of impulse buying behavior is increasing (Piron, 1993). For retailers, encouraging impulse buying is crucial not only for immediate sales but also for the long-term relationship with their customers because impulse buying can provide pleasure that satisfies consumers' psychological desire. Consumers nowadays spend more time using computers and are getting used to buying products through the Internet (Park, 2002), and therefore, understanding consumers' impulse buying behavior in an online shopping context is also important for retailers. However, no studies have been conducted to address consumers' impulse buying behavior in apparel online purchase. The purpose of this study was to examine the relationships of four variables (i.e., product

Table 6.1. Hypotheses and Summary of the Results

Hypotheses	Results
H1: Impulsive and non-impulsive online apparel buyers will differ significantly in their apparel involvement.	Supported
H1a and H1b: Impulsive and non-impulsive online apparel buyers will differ significantly in their apparel involvement in terms of the sign value/perceived importance of apparel products. Impulsive online apparel buyers will have a higher degree of apparel involvement in terms of the sign value/perceived importance of apparel products than non-impulsive online apparel buyers.	Supported
H1c: Impulsive and non-impulsive online apparel buyers will differ significantly in their apparel involvement in terms of the pleasure value of apparel products. Impulsive online apparel buyers will have a higher degree of apparel involvement in terms of the pleasure value of apparel products than non-impulsive online apparel buyers.	Supported
H1d and H1e: Impulsive and non-impulsive online apparel buyers will differ significantly in their apparel involvement in terms of the risk importance/probability of apparel products. Impulsive online apparel buyers will have a lower degree of apparel involvement in terms of the risk importance/probability of apparel products than non-impulsive online apparel buyers.	Supported
H2: The evaluation of the attributes of the websites where impulse purchases and non-impulse purchases of apparel products were made will be significantly different.	Supported
H2a: The design of the websites where impulse purchases and non-impulse purchases of apparel products were made will be significantly different. The websites where impulse purchases were made will have significantly better website design than the websites where non-impulse purchases were made.	Supported
H2b: The product presentation in the websites where impulse purchases and non-impulse purchases of apparel products were made will be significantly different. The product presentation of the websites where impulse purchases were made will be significantly better than the websites where non-impulse purchases were made.	Supported
H2c: The promotion provided by the websites where impulse purchases and non-impulse purchases of apparel products were made will be significantly different. The websites where impulse purchases were made will provide a significantly better deal on promotion than the websites where non-impulse purchases were made.	Supported
H2d: The characteristics of search function/information provision will be significantly different between the websites where impulse purchases and where non-impulse purchases of apparel products were made. The websites where impulse purchases were made will provide a significantly better search function/information provision than the websites where non-impulse purchases were made.	Supported
H3: The product categories of impulse purchases and non-impulse purchases will be significantly different.	Supported
H3a: Some product categories will be purchased significantly more in impulse purchases than in non-impulse purchases.	Supported
H3b: Low-priced apparel items will be purchased significantly more in impulse purchases than in non-impulse purchases.	Supported
H4: Respondents' apparel involvement (i.e., perception of sign value/perceived importance, risk importance/probability, pleasure value), website attributes (i.e., website design, product presentation, promotion, search function/information provision), and product price will be significantly related to the impulsiveness of online apparel buying behavior.	Partially Supported

involvement, website attributes, product category, product price) with college students' impulse buying behavior in apparel online purchase. Following sections show discussions and implications of the findings.

Gender of Online Apparel Shoppers

The current study found that more female than male respondents visited apparel websites and purchased apparel products online. These results are similar to the studies of Lee and Johnson (2002) and Seock (2003), which found that more Internet apparel buyers were female shoppers. The reason why there were more female online apparel buyers may be explained by the "social constructionist model of material possessions" proposed by Dittmar (1992), suggesting that gender differences exist in choosing favorite possessions. Men considered the possessions as use-related and activity-related, and valued features of the items such as electronics and sports equipment. Women favored items with sentimental value such as apparel products because of the emotional comfort that the possessions provide as well as the relationship with others that the possessions symbolize. This proposition may explain why there were consistently more female respondents than male respondents in many studies regarding apparel online shopping.

Although the current study results showed that there were fewer male consumers who bought apparel products online, retailers cannot under estimate the market of men's wear because young male consumers nowadays show more interest in their appearance as well as in the clothes they wear (Dickerson, 2003). In the United States, consumer expenditure in 1999 for men's and boys' clothing and accessories, excluding shoes, were about $70 billion (American Apparel Manufacturers Association, 2000). A major growth in men's wear has resulted from casual dress on Fridays (Dickerson, 2003). To increase sales online, apparel retailers may need to focus on drawing more male consumers to visit their websites. This study found that for both males and female respondents, there was a significant and positive correlation between the number of times that the respondents visited the websites that sold apparel products and the number of items that they purchased online, suggesting that the more a consumer visits apparel websites, the more likely he or she would purchase apparel products online. Therefore, drawing consumers to visit the website is an important strategy to increase sales online.

The finding showed that male and female respondents had similar reasons why they visited the website where they made their last online clothing/accessories purchase. The top three reasons were advertisement via media, search engines of other websites, and advertisement/catalog of the website via postal mail. According to these results, apparel marketers need to identify male and female college students' favorite forms of media (e.g., magazine, newspaper, TV) and create advertisements to encourage target consumers to visit their websites. To ensure that consumers can easily find the company website, the website address needs to be included in popular search engines, such as Google and Yahoo. Sending advertisements or catalogs of the website through postal mail to college students is another effective strategy to promote the company website.

<u>Impulse Buyers</u>

Among online buyers in the study, more than one third of them were impulse buyers. These impulse buyers had more total monthly income and higher average clothing expenditure than the non-impulse buyers. They visited websites that sold clothing/accessories more frequently and purchased more items from these websites than the non-impulse buyer group. These results suggest that online impulse buyers have greater potential buying power in apparel products than the non-impulse buyers, and therefore, they are an important segment for online apparel marketers.

Apparel Involvement of Impulse Buyers

H1 and the five sub-hypotheses compared the differences between the impulse buyer group and the non-impulse buyer group in three elements of apparel involvement: sign value/perceived importance, pleasure value, and risk importance/probability. The results showed that the impulse buyer group had a significantly higher degree of apparel involvement in the sign vale/perceived importance and pleasure value of apparel products than the non-impulse buyer group, but had a significantly lower degree of apparel involvement in risk importance/probability. These results indicated that the respondents who purchased apparel products more on impulse were those who believed that apparel products possess the ability to communicate messages about his/her identity (i.e., high sign value), play a central role in his/her life (i.e., high perceived

importance), and provide him/her with pleasure (i.e., high pleasure value), and those who perceived that the probability of making a mispurchase in apparel products was low (i.e., low risk possibility) and negative consequences of mispurchase were not important (i.e., low risk importance).

The results regarding the sign value/perceived importance in apparel involvement support the hypothesis proposed by Dittmar, et al. (1996), indicating that impulse buying behavior is driven by the symbolic self-completion process. They proposed that the reason why consumers do impulse buying is because they are trying to use the products to fulfill the gap between their actual self and ideal self. These consumers do not just consume actual products, but also, or even instead, consume the symbolic meanings of the products. When consumers see a product that can fulfill the gap and help to complete the self, they consider such products contain high sign value and are important to them; consequently, they are more likely to purchase these products on impulse. The symbolic self-completion theory provides a possible psychological motivation why individuals who have high apparel involvement in sign value and perceived importance are likely to engage in impulse buying behavior. These results suggest that to create a website that can facilitate impulse buying behavior in apparel purchase, the website must be well connected to the sign value of the product. Creating a brand or store image that can express target customers' status, personality, or identity is crucial to apparel retailers. Apparel marketers could use marketing mix such as promotion, pricing, and distribution strategies to create a symbolic meaning of their store and products in the mind of their target consumers. A good example illustrating the success of connecting brand image with the sign value of a product is Tiger Woods as the endorser of Nike golf wear. By associating Tiger Woods, an exciting and successful golfer, with Nike products, Nike increased the sign value of their products. Consumers may feel greater excitement when they purchase and put on Nike golf wear because these products can express their excitement about playing golf and their goals to be a successful golfer like Tiger Woods.

The results regarding the pleasure value of apparel products support the proposition of Elliott (1994) and Faber and Christenson (1996), suggesting that consumers with high pleasure value of apparel products are likely to buy on impulse. This result is also consistent with previous studies, which found that consumers' impulse buying behavior was related to their desire to satisfy hedonic needs (Hirschman, 1992; Holbrook & Hirschman, 1982), and that

consumers felt energized or uplifted after impulse shopping (Cobb & Hoyer, 1986; Rook, 1987). This finding suggests that pleasure value in apparel involvement can be another precursor of impulse buying behavior in apparel purchase. Because college students' impulse buying behavior is closely related to pleasure value in apparel involvement, apparel marketers targeting college students could include multimedia features, such as flash movies, video clips, audio/music, and even games to create a fun and exciting website environment. For example, letting consumers have a 'virtual closet' that allows customers to pick their favorite clothes and accessories from the website and put them in the closet can be one strategy to create a pleasurable website environment. This closet can have different sections depending on the events such as 'clothes for school' and 'clothes for a date.' Having his or her own virtual closet can not only provide pleasure and excitement of shopping at the website but also help customers to obtain ideas about what products in the website they would like to buy for various occasions, and thus, increasing customers' purchase decision process. Another way to make shopping online more pleasurable is by creating an online shopping helper that can memorize customers' preference and past choices of products. Consumers can name the shopping helper to their favorable name such as 'Christy' or 'Andy,' and consider this system as a friend that takes them shopping. Marketers can also make this system to remind consumers with updated products or help them find and choose a product that fits them to increase sales and impulse buying behavior. Creating an 'online lounge' where consumers can comfortably chat and share information about products that they purchased may be another strategy that could generate a pleasurable website environment and assist customers in purchase decision making.

The results regarding risk probability/importance were consistent with the findings of Rook and Fisher (1995), which showed that impulsiveness had a positive relationship with the amount of risk taking. Uncertainty makes consumers search for information, elicit information from others, and participate more in the decision-making process, and therefore, consumers who perceive apparel product purchase as a higher risk would engage less in impulse buying than those who perceive apparel product purchase as a lower risk. These results suggest that to assist consumers in making an immediate purchase decision, it is important to reduce online shoppers' perceived risk. Studies showed that consumers perceived a higher level of risk with online shopping than with offline shopping, especially in security issues (Lee & Johnson, 2002; McCorkle, 1990; Murphy, 1998). It would be useful for online retailers to provide information

about privacy and security, use security certification (e.g. BBB, VeriSign) and offer satisfaction guarantees to reduce consumers' perception of risks associated with online shopping, especially if online retailers do not have well-known brand names. Adapting a software that protects consumers' personal information to prevent identity theft and providing clear information about the safety system and policy of the website may reduce consumers' fears in buying online. For apparel products, prior studies indicated that the inability to feel the fabric and examine the size or appearance of the products before purchasing online were the main risks perceived by apparel consumers (Bhatnagar et al., 2000; CyberAtlas Trends & Statistics, 2000; What Do Women, 2001). To reduce the disadvantage of the inability to feel and examine the product, providing online chat rooms and 1-800 numbers to answer customers' questions may reduce customers' uncertainty of making a right choice. For new customers, online marketers may want to offer discount code or coupons to encourage them to try their products. For repeat customers, providing products with consistent quality that always meets customers' expectation is an effective strategy to reduce their perceived risk.

Website Attributes and Impulse Purchase

H2 and the four sub-hypotheses compared the differences between the impulse purchase group and the non-impulse purchase group in their evaluation of website attributes regarding website design, product presentation, promotion, and search function/information provision. The results showed that the respondents who purchased their last online apparel product on impulse evaluated the websites where they purchased the product as having better performance in all four website attributes than those who did not purchase on impulse, suggesting that websites that provide superior performance in these attributes could encourage impulse purchase. These results are consistent with the findings and propositions of several prior studies. Eroglu and Machleit (1993) and Mitchell (1994) investigated the brick-and-mortar retail store environment and found that atmospheric stimuli in the retail environment (e.g., sights) were important factors to trigger impulse buying. Consistently, this study found that website design, which plays an important role in creating website environments, was significantly related to impulse buying behavior. The result that product presentation was significantly related to impulse buying supports the proposition of Then and Delong (1999), who suggested that product presentation with different angles and picture enlargement in Internet shopping can create a pleasurable shopping

experience and lead to impulse buying behavior. Hoch and Loewenstein (1991) found that impulsive individuals tended to make a decision to accept an inferior reward rather than wait for a superior reward when the object of the reward was placed in view. Consistently, this study found that respondents who made the last purchase on impulse considered that the website provided a better deal on promotion and discount, supporting that sale promotion is an effective way to encourage consumers to make their purchase decision promptly. The study results also suggest that providing a better product search function and clear information regarding the policy of the website encourages impulse buying behavior. This finding may be explained by the proposition and finding from the studies of Jarboe et al. (1987) and Kim (2003). Jarboe et al. suggested that website attributes, such as ease in product search, can encourage consumers to increase their browsing activities. Kim (2003) found that as consumers browsed longer, they were likely to encounter more stimuli and products that would increase the possibility of impulse buying behavior.

Several marketing applications can be drawn from the results of H2. To facilitate impulse buying behavior, online apparel marketers should focus on their website design such as good quality photos of products, organized product presentation, large image, and detailed written description of products as a mean to facilitate more impulse buying behaviors. Zoom functions and close-ups, showing alternative images (e.g. side view and back view), pictures of fabric swatches, alternative color views, and video presentation are useful to minimize disadvantages associated with online apparel shopping. Other strategies, such as showing products from various angles and images that coordinate different items and providing customers with a virtual model which helps them to virtually try on apparel products to see how the items may look on the customers' body, can be used as product presentation tools to stimulate online impulse buying behavior. Rather than asking consumers to accumulate a certain number of purchases and wait for a reward, it is better to provide customers with instant promotions, such as buy one get one free, an instant discount when consumers purchase a certain amount, free shipping, or free gifts to facilitate impulse buying behavior. Providing convenient search functions to assist customers in finding desired products and making product and policy information available are also strategies that may encourage impulse buying.

Product Categories/Price and Impulse Purchase

H3 and the two sub-hypotheses examined the differences between the participants in the impulse purchase group and the non-impulse purchase group in the product categories they purchased and the product price they paid in the last apparel online purchase. The results of H3a revealed that compared with those who did not purchase on impulse, the respondents who purchased their last online apparel product on impulse bought significantly more products in categories such as shirt/blouse and belt, but significantly less in shoes, indicating that some product categories were purchased more on impulse than the others. These results may be explained by a similar study conducted by Lee and Hong (1999), which found that Internet shoppers would only purchase items such as casual clothing and fashion goods that did not focus much on fit. Items such as shoes are purchased less on impulse because even if consumers like the style and would like to buy it immediately, consumers need to be sure that the shoes can fit them comfortably before they make the purchase. The results of H3b showed that items that cost less than $25 were purchased significantly more by the respondents who purchased their last online apparel product on impulse than those who did not purchase on impulse. This result is consistent with the study by Deshpande and Krishnan (1980), which also found that the cost of a product was associated with impulse buying behavior.

These results suggest that online apparel marketers that target college students who enjoy purchasing apparel products on impulse may consider carrying more items such as shirts and blouses that do not require close fit in a lower price range (e.g., $25 or lower). This strategy can help the company to position its website as a place where its target customers can easily find apparel products that they can buy on impulse and thus enjoy the pleasure and excitement generated by the impulse purchase. To lower down the unit price, online apparel marketers may consider listing the price of each product item individually rather than as a set. For example, instead of labeling the price of a suit, the price of blouse, coat, and skirt can be labeled separately and each item can be sold individually. This strategy can facilitate impulse buying behavior not only because it is easier for consumers to make a purchase decision due to the low unit price but also because it is easier for consumers who wear different sizes for top and bottom items to find garments that fit. When offering a discount promotion, listing an original price first then showing the cut-off price or the percentage of a cut down can also lower down the price that consumers perceive. For items that require closer fit, to reduce the hindrance of impulse buying, information

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about fit is crucial to reduce consumers' concern. A detailed size chart is basic but essential for consumers to select the size that fits them best. Marketers may also consider providing a three-dimensional visual model with consumers' own body measurements to help consumers to gain an idea about how the item would fit on them. For example, Lands'End has 'my virtual model experience' system that allows consumers to try its clothes on a model with a consumer's own size (Landsend, 2004). This system can help consumers to reduce the concern of making a poor choice and thus encourage the impulse buying behavior.

<u>Relationships of Apparel Involvement, Website Attributes, and Product Price</u>

Hypothesis 4 examined the relationships of apparel involvement (i.e., sign value/perceived importance, pleasure value, risk importance/probability), website attributes (i.e., website design, product presentation, promotion, search function/information provision), and product price with the impulsiveness of online apparel buying behavior. The results revealed that four factors significantly related to impulsiveness of online apparel buying behavior and they were sign value/perceived importance in apparel involvement, product price, risk importance/probability in apparel involvement, and product presentation of website attribute. According to these multiple regression results, online apparel marketers who have limited resources may consider focusing their efforts on these four variables that are most closely related to impulse buying behavior when developing a marketing strategy to facilitate impulse buying behavior of college student consumers.

Summary of Implications of the Findings based on H4

According to the multiple regression results, sign value/perceived importance in apparel involvement was the most important variable that contributed to the impulsiveness of online apparel buying behavior, suggesting that to facilitate college student consumers' impulse buying behavior in apparel purchase, marketers must be aware of the symbolic meanings of the products because as the Symbolic Self Completion Theory suggests, a motivation of impulse shopping is the eagerness of getting closer to one's ideal self by consuming the symbolic meanings of a product. The second important variable related to impulse buying was product price. To lower the price that consumers perceive, when offering discount promotion, online apparel marketers

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could list the original price first then show the cut-off price or show the percentage of a cut down. Listing the price of each product item individually rather than listing as a set can be another strategy to lower down the unit price. The third important variable related to impulse buying was risk probability/importance. Since online buyers with lower degree of concern in the risk of apparel purchase would buy on impulse more, it is important for apparel marketers to reduce online shoppers' perceived risk. Solving security issues by adapting a software that protects consumers' personal information and providing information about the safety system of the website may reduce consumers' worries about buying online. To reduce the disadvantage of the inability to feel and examine an apparel product before purchasing online, marketers could provide a live two-way communication system and/or a three-dimensional visual model that helps consumers to reduce the uncertainty of making a right choice. Product presentation was the fourth important factor in facilitating online apparel impulse buying behavior. Apparel websites with more interesting visual product presentations, such as showing the product in a large size image and from various angles, presenting images of the end use, and displaying similar items in conjunction, could generate higher possibility of online impulse buying behavior.

Limitations of the Studies and Recommendations for Future Research

The subjects of this study were college students between 18 and 22 recruited from six universities at different geographical regions using the systematic cluster sampling method. However, these six universities were all public universities and the sample were not randomly selected, and therefore, the sample did not represent the whole population of college students. The results cannot be generalized to all college students. Other types of school including four-year colleges, private colleges, religious colleges (e.g., Christian colleges), and community colleges can be used in the future studies to examine if the results of this study are consistent with the results collected from the students of other colleges. Furthermore, an incentive of $200 gift certificate was given to encourage subjects' participation which might cause sampling bias. It is possible that the reason why some respondents participated in this survey was to win the incentive and fewer subjects who did not care about winning the incentive participated in the study. Another possible sampling bias was the Internet accessibility during the summer break. During the semester, students usually can assess to the Internet either

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through a personal computer or computers in the university. However, during the summer break, some students may not be able to assess to the Internet at home or other places. Because the subjects were recruited by e-mail during a summer break, only respondents who had an access to the Internet during the summer break could receive the e-mail and answer the survey. In addition to the Internet accessibility, students' consuming patterns might also vary depending on the season (e.g., during the semester, summer break, holiday seasons). For example, if the survey was conducted during the Thanksgivings break or Christmas season, the change of impulse buying behavior might increase because the holiday atmosphere might create more pleasure and the seasonal promotion might provide more sale discounts. According to the results of this study, pleasure and websites promotion were significantly related to impulse buying behaviors, and therefore, if the survey was conducted during the holiday season, the results might vary. Future studies are recommended to collect data in different seasons of the year and to examine if results are different depending on the time of data collection.

The current study is based on a survey design, which provides a quick, efficient, and inexpensive means of assessing information about a population (Zikmund, 1999). However, one of the disadvantages of survey design is that respondents answer questions regarding their experiences based on their recall. Although the results indicated that most respondents of this study made their last online apparel purchase within the past two months, respondents' answers may still have errors if they remembered their experiences inaccurately. In addition, as all the studies using a survey design, variables measured in the study are based on respondents' self-examination. It is possible that respondents may answer the questions based on their concepts of "right" or "wrong," and the answers may not reflect their true behaviors. To verify the current results, future studies using other research methods such as experimental design by creating a sample apparel website or using an existing online apparel website are needed for comparison.

The regression results showed that two variables of apparel involvement, one variable of website attributes, and product price had significant relationships with impulsiveness of online apparel buying behavior, explaining 45.3% of the variance in the impulsiveness of online apparel buying behavior. In future studies, other variables that may explain impulsiveness of online apparel buying behavior, such as advertisement, mood, money

availability, and time availability need to be included in the examination to increase the capability of predicting impulsiveness of online apparel buying behavior.

The Symbolic Self Completion Theory was used to explain the results of current study. The symbolic self-completion process may be one of the driving forces for impulse buying because an individual who has a strong need to use apparel products as a symbolic tool to get closer to his or her ideal self and to persuade others that he or she has a certain identity may buy products on impulse. Further studies examining whether symbolic self-completion is truly an important motivation for consumers to engage impulse buying for apparel products are recommended.

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APPENDIXES

Appendix A: Definitions of Impulse Buying

Appendix B: Recruitment E-mails

Appendix C: Final Questionnaires

Appendix D: Removed Questions

Appendix E: Demographics of the Six Sample Universities

Appendix A: Definitions of Impulse Buying

Table 1 shows the definitional elements that were used in previous studies to define impulse buying behavior in consecutive order. Table 2 lists the definitional elements presented as numbers in Table 1.

Table 1. Definitional Elements on Previous Studies

Elements / Researchers	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Du Pont (1945 – 1965)	X															
Clover (1950)	X															
Applebaum (1951)	X	X														
West (1951)	X															
Nesbitt (1959)			X													
Stern (1962)																
Reminder Impulse	X	X														
Suggestive Impulse	X	X														
Planned Impulse		X	X													
Pure Impulse	X	X		X												
Davidson (1966)	X			X												
Kollat & Willett (1967)	X								X							
Day (1970)			X													
McNeal (1973)	X					X										
D'Antoni & Shenson (1973)							X									
Prasad (1975)	X								X							
Runyon (1977)	X															
Bellenger et al. (1978)									X							
Engel & Blackwell (1982)	X							X	X							
Weinberg & Gottwald(1982)	X												X			
Loudon & Della Bitta(1984)			X													
Rook & Hoch (1985)			X													
Cobb & Hoyer (1986)										X	X	X	X	X		
Rook (1987)								X	X							
Abratt & Goodey (1990)										X		X		X		
Han et al. (1991)	X															
Piron (1991)	X	X														
Rook & Fisher (1995)		X								X					X	
Burroughs (1996)										X						X
Dittmar et al. (1996)																X
Beatty & Ferrell (1998)								X	X	X					X	
Hausman (2000)										X		X		X		

Table 2. Explanation of the Definitional Elements

Element No. Shown in Table 1	Definitional Elements
1	Unplanned purchase
2	Response to stimulus
3	Deliberately planned to benefit from special offers
4	Thrill seeking
5	Decision made on the spur of the moment
6	Result of a deliberation process
7	Relative time lapse
8	Not in response to a previously recognized problem
9	No buying intentions formed prior to entering the store
10	Sudden and spontaneous desire to act
11	State of psychological disequilibrium
12	Psychological conflict and struggle
13	Reduction of cognitive evaluation
14	No evaluation of consequences
15	Unreflective, immediate, kinetic buying
16	Self-object meaning-matching

Appendix B: Recruitment E-mails

I. The initial e-mail

HERE IS A CHANCE TO WIN $200 Amazone gift certificate!!!

Have you ever visited an apparel website from the Internet before?
If so, PARTICIPATE IN THIS SURVEY and get a chance to WIN $200 Amazone gift certificate!

To be eligible for the drawing:
1. You must be age 18 or over.
2. Complete all the questions in the survey
3. PUT your e-mail address at the end of the questionnaire.
4. SUBMIT the survey within one week.

The drawing will be held after the data collection of the project is completed and the announcement of the WINNER will be sent through e-mail to all participants in the drawing. The winner's name will be revealed in the e-mail with permission.

I am a Ph. D. student at Virginia Tech. As a part of my dissertation, I am collecting information about INTERNET apparel shopping behavior. It will take about 5-10 minutes to complete this survey. A completion of the questionnaire and submitting it will imply your consent for participation in this survey. If you have any questions regarding the survey, please feel free to contact me at **yrhee@vt.edu** or my advisor, Dr. Jessie Chen-Yu at chenyu@vt.edu.

Thank you very much,

Monica Rhee, Ph. D. Candidate
Department of Apparel, Housing and Resource Management
Wallace Hall 248
Virginia Tech

Have you ever visited a website selling apparel items over the past 6 months?

> **Yes**
>
> **No   (If NO, please Click Link 1.)**

Have you purchased an apparel item from an Internet website over the past 6 months?

> **Yes   (If YES, please Click Link 2)**
>
> **No   (If NO, please Click Link 3)**

II. **The follow-up e-mail**

Please note that this is a REMINDER e-mail to encourage those who had not yet completed the survey to fill out and submit the questionnaire soon.

If you have not yet participated in the survey distributed four days ago, please do so now and get A CHANCE TO WIN $200 Amazone gift certificate!!!

Have you ever visited an apparel website from the Internet before?
If so, PARTICIPATE IN THIS SURVEY and get a chance to WIN $200 Amazone gift certificate!

To be eligible for the drawing:
5. You must be age 18 or over.
6. Complete all the questions in the survey
7. PUT your e-mail address at the end of the questionnaire.
8. SUBMIT the survey within one week.

The drawing will be held after the data collection of the project is completed and the announcement of the WINNER will be sent through e-mail to all participants in the drawing. The winner's name will be revealed in the e-mail with permission.

I am a Ph. D. student at Virginia Tech. As a part of my dissertation, I am collecting information about INTERNET apparel shopping behavior. It will take about 5-10 minutes to complete this survey. A completion of the questionnaire and submitting it will imply your consent for participation in this survey. If you have any questions regarding the survey, please feel free to contact me at **yrhee@vt.edu** or my advisor, Dr. Jessie Chen-Yu at chenyu@vt.edu.

Thank you very much,

Monica Rhee, Ph. D. Candidate
Department of Apparel, Housing and Resource Management
Wallace Hall 248
Virginia Tech

Have you ever visited a website selling apparel items over the past 6 months?

> **Yes**

> **No**   **(If NO, please <u>Click Link 1</u>.)**

Have you purchased an apparel item from an Internet website over the past 6 months?

> **Yes**   **(If YES, please <u>Click Link 2</u>)**

> **No**   **(If NO, please <u>Click Link 3</u>)**

Appendix C: Final Questionnaires

I. Questionnaire for Non-apparel Website Visitors

Your Feelings When You Do Shopping:

Please think about your <u>regular shopping</u>. Please indicate the extent to which you agree or disagree with how well each statement describes your feelings.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

I often feel a spontaneous urge to buy clothing/accessories.
1   2   3   4   5

I can not resist buying clothing/accessories if I really like it.
1   2   3   4   5

I often buy clothing/accessories while I visit websites for other purposes or other products.
1   2   3   4   5

I do not buy any clothing/accessories that I was not planning on buying.
1   2   3   4   5

I buy clothing/accessories I like without a lot of thinking.
1   2   3   4   5

Your Perceptions about Clothing/Accessories

Please indicate the extent to which you agree or disagree with how well each statement describes you.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

Clothing/accessories help me express who I am.
1   2   3   4   5

Shopping for clothing/accessories is fun.
1   2   3   4   5

The way I look in my clothing/accessories is important to me.
1   2   3   4   5

I have a lot to lose if I purchase something I don't like to wear.
1   2   3   4   5

My choice of clothing/accessories is relevant to my self-image.
1   2   3   4   5

Making a bad choice is something I worry about when shopping for clothing/accessories.
1   2   3   4   5

I enjoy experimenting with colors in clothing/accessories to create the best outfit.
1   2   3   4   5

I rate clothing/accessories as being a priority to me.
1   2   3   4   5

If the clothing/accessories I purchase do not have the quality I expect, I am upset.
1   2   3   4   5

More about You:

Please indicate the extent to which you agree or disagree with how well each statement describes you.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

Wearing my best clothing/accessories increases my self-confidence.
1   2   3   4   5

Choosing clothing/accessories is rather complicated.
1   2   3   4   5

I have an interest in clothing/accessories.
1   2   3   4   5

If, after I have bought clothing/accessories, my choice proved to be poor, I would be annoyed.
1   2   3   4   5

Clothing/accessories I wear allow others to see me as I would like them to see me.
1   2   3   4   5

When I buy clothing/accessories, I am never quite sure if I made the right choice or not.
1   2   3   4   5

I enjoy buying clothing/accessories.
1   2   3   4   5

Clothing/accessories are important to me.
1   2   3   4   5

Your Online Experience:

Please select answers based on your <u>online experience</u>.

How often have you visited websites selling clothing/accessories over the past 6 months?

Every week   Every other week   Every month   Every 3 months   Every 6 months
Can not remember   Others (please specify):

What is the reason for not visiting a website that sells clothing/accessories over the past 6 months?

Have you ever had any online experience during which you wanted to buy a clothing/accessory item on impulse but decided not to purchase? If so, why? (Please choose <u>ALL</u> that apply.)
It was difficult to navigate the website.
Did not like the website design.
Did not like the product presentation.
Did not provide promotion/discount for the item.
Not enough product information
The item was too expensive.
No such experience
Others (please specify):

What information or functions would you like a website selling clothing/accessories to provide?

Your Background:

The following questions ask information about you. Please select <u>ONE</u> that best describes you.

Your gender

Male   Female

Your age

18   19   20   21   22   23   24   25-34   35-44   45 or more

Your student status
Freshman   Sophomore   Junior   Senior   Master's student   Ph.D. student
Others (please specify):

Your marital status

Single and never married   Married   Separated   Divorced   Widow

Your monthly income from your work

Do not work $1 - $500 $501 - $ 1000 $1001 - $1500 $1501 - $2000
$2001 - $2500 $2501 - $3000   More than $3000

Your total monthly income from work, allowance, or other sources

$1 - $500 $501 - $ 1000 $1001 - $1500 $1501 - $2000 $2001 - $2500
$2501 - $3000   More than $3000

Average Monthly amount spent on clothing/accessories

$1 - $500 $501 - $ 1000 $1001 - $1500 $1501 - $2000 $2001 - $2500
$2501 - $3000   More than $3000

Your e-mail address:

II. Questionnaire for Online Apparel Buyers

Clothing/Accessories Internet Purchase

Your Feelings When You Do Online Shopping:

Please think about your <u>regular online shopping</u>. Please indicate the extent to which you agree or disagree with how well each statement describes your feelings.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

I often feel a spontaneous urge to buy clothing/accessories.
1   2   3   4   5

I can not resist buying clothing/accessories if I really like it.
1   2   3   4   5

I often buy clothing/accessories while I visit websites for other purposes or other products.
1   2   3   4   5

I do not buy any clothing/accessories that I was not planning on buying.
1   2   3   4   5

I buy clothing/accessories I like without a lot of thinking.
1   2   3   4   5

Your Perceptions about Clothing/Accessories

Please indicate the extent to which you agree or disagree with how well each statement describes you.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

Clothing/accessories help me express who I am.
1   2   3   4   5

Shopping for clothing/accessories is fun.
1   2   3   4   5

The way I look in my clothing/accessories is important to me.

1   2   3   4   5

I have a lot to lose if I purchase something I don't like to wear.
1   2   3   4   5

My choice of clothing/accessories is relevant to my self-image.
1   2   3   4   5

Making a bad choice is something I worry about when shopping for clothing/accessories.
1   2   3   4   5

I enjoy experimenting with colors in clothing/accessories to create the best outfit.
1   2   3   4   5

I rate clothing/accessories as being a priority to me.
1   2   3   4   5

If the clothing/accessories I purchase do not have the quality I expect, I am upset.
1   2   3   4   5

More about You:

Please indicate the extent to which you agree or disagree with how well each statement describes you.
1 Strongly Disagree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

Wearing my best clothing/accessories increases my self-confidence.
1   2   3   4   5

Choosing clothing/accessories is rather complicated.
1   2   3   4   5

I have an interest in clothing/accessories.
1   2   3   4   5

If, after I have bought clothing/accessories, my choice proved to be poor, I would be annoyed.
1   2   3   4   5

Clothing/accessories I wear allow others to see me as I would like them to see me.
1   2   3   4   5

When I buy clothing/accessories, I am never quite sure if I made the right choice or not.
1   2   3   4   5

I enjoy buying clothing/accessories.

1   2   3   4   5

Clothing/accessories are important to me.
1   2   3   4   5

Your Online Shopping Experience:

Please select answers based on your <u>online shopping experience</u>.

How often have you visited websites selling clothing/accessories over the past 6 months?

Every week   Every other week   Every month   Every 3 months   Every 6 months
Can not remember   Others (please specify):

How many clothing/accessory items have you purchased through the Internet over the past 6 months?
None   1-3   4-6   7-9   10-15   16-20   More than 20   Others (please specify):

When was your last online clothing/accessory purchase?

In the past month   1-2 month months ago   2-3 months ago   4-6 months ago
More than 6 months ago   Others (please specify):

What made you visit the website where you made the last clothing/accessory online purchase? (Please choose <u>ALL</u> that apply.)
Pop-up advertisement
E-mail notification
Advertisement via media (e.g., magazine, newspaper, TV)
Mail advertisement or catalogs of the website
Using search engines of other websites (e.g., google, yahoo)
Others (please specify):

What type of clothing/accessories did you purchase in your last online purchase? (Please choose <u>ALL</u> that apply.)
Belt   Coat   Cosmetics   Dress   Gloves   Hair accessory   Hat   Jacket
Jewelry   Pants/Jeans   Purse/Bag   Scarves   Shirt/Blouse   Shoes   Skirt
Socks/Stockings   Suit   Sunglasses   Sweater   Swimwear   Tie   T-shirt
Underwear   Watch   Others (please specify):
From your last online clothing/accessory purchase, select <u>ONE</u> item to answer the following questions. Please indicate which <u>ONE</u> item you have selected from the above list?

Your Feelings When You Purchased the Clothing/Accessory that You Selected:

Please think about your <u>last online purchase</u>. Please indicate the extent to which you agree or disagree with how well each statement describes your feelings.
1 Strongly <u>Disagree</u>
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

When I purchased the item, I felt a spontaneous urge to buy.
1   2   3   4   5

I bought the item while I visited the website for other purposes/products.
1   2   3   4   5

I did not buy anything that I was not planning on buying.
1   2   3   4   5

I bought the item without a lot of thinking.
1   2   3   4   5

I could not resist buying the item because I really liked it.
1   2   3   4   5

When I purchased the apparel item, I felt like I just had to have the item.
1   2   3   4   5

Product and Price Information about the Clothing/Accessory You Selected:

Please select answers based on your last online clothing/accessory shopping experience.

How much did the item cost?

$1-$25 $26-$50 $51-$75 $ 76-$100 $101-$200 $201-$300
$301-400   More than $201

What kind of promotion was provided for the item that you purchased? (Please choose <u>ALL</u> that apply.)
No promotion   Promotional gift   Discounts
Buy one get one free   Free shipping   Others (please specify):
How big was the discount, if any?

No discount 10% 20% 25% 30% 40% 50% 75% Can not remember
Other (please specify):

Have you ever had any online experience during which you wanted to buy a clothing/accessory item on impulse but decided not to purchase? If so, why? (Please choose

ALL that apply.)
It was difficult to navigate the website.
Did not like the website design.
Did not like the product presentation.
Did not provide promotion/discount for the item.
Not enough product information
The item was too expensive.
No such experience
Others (please specify):

Your Evaluation of the Website for the Clothing/Accessory Item You Selected:

Please think about you're <u>the website where you purchased the last clothing/accessory item you selected</u>. Please indicate the extent to which you agree or disagree with how well each statement describes the attributes of the website.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

I could easily find what I wanted.
1   2   3   4   5

The website provided good discount.
1   2   3   4   5

The website showed images that coordinated different items.
1   2   3   4   5

Different screens came up quickly.
1   2   3   4   5

I could use a visual model on the website. (A virtual model is a 3-D model of a customer in order to let the customer virtually try on clothes/accessories to see how these items may look on the customer's body.)
1   2   3   4   5

The website provided good deal on shipping.
1   2   3   4   5

The website had an effective search function.
1   2   3   4   5

The website provided detailed policies for shipping and handling of the products.
1   2   3   4   5

The way products were presented was attractive.
1   2   3   4   5

The website gave up-to-date information about newly added products.
1   2   3   4   5

More about Your Website Evaluation:

Please think about you're <u>the website where you purchased the last clothing/accessory item you selected</u>. Please indicate the extent to which you agree or disagree with how well each statement describes the attributes of the website.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

I could get to the website quickly.
1   2   3   4   5

The website showed product colors that helped me to decide the color of the product that I should select.
1   2   3   4   5

Products were presented in an organized way.
1   2   3   4   5

The website gave detailed written descriptions of products.
1   2   3   4   5

The website showed good quality photos of products.
1   2   3   4   5

The images on the website were large enough.
1   2   3   4   5

The website provided a good promotion (e.g., gift, coupon).
1   2   3   4   5

The website showed products from various angles.
1   2   3   4   5

The website had a size chart that helped me to decide the size of the product that I should select.
1   2   3   4   5

What other information or functions would you like a website selling clothing/accessories to provide?

Your Background:

The following questions ask information about you. Please select <u>ONE</u> that best describes you.

Your gender

Male   Female

Your age

18   19   20   21   22   23   24   25-34   35-44   45 or more

Your student status

Freshman   Sophomore   Junior   Senior   Master's student   Ph.D. student
Others (please specify):

Your marital status

Single and never married   Married   Separated   Divorced   Widow

Your monthly income from your work

Do not work $1 - $500 $501 - $ 1000 $1001 - $1500 $1501 - $2000
$2001 - $2500 $2501 - $3000   More than $3000

Your total monthly income from work, allowance, or other sources

$1 - $500 $501 - $ 1000 $1001 - $1500 $1501 - $2000 $2001 - $2500
$2501 - $3000   More than $3000

Average Monthly amount spent on clothing/accessories

$1 - $500 $501 - $ 1000 $1001 - $1500 $1501 - $2000 $2001 - $2500
$2501 - $3000   More than $3000

Your e-mail address:

III. Questionnaire for Non-online Apparel Buyers

Your Feelings When You Do Online Shopping:

Please think about your <u>regular online shopping</u>. Please indicate the extent to which you agree or disagree with how well each statement describes your feelings.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

I often feel a spontaneous urge to buy clothing/accessories.
1   2   3   4   5

I can not resist buying clothing/accessories if I really like it.
1   2   3   4   5

I often buy clothing/accessories while I visit websites for other purposes or other products.
1   2   3   4   5

I do not buy any clothing/accessories that I was not planning on buying.
1   2   3   4   5

I buy clothing/accessories I like without a lot of thinking.
1   2   3   4   5

Your Perceptions about Clothing/Accessories

Please indicate the extent to which you agree or disagree with how well each statement describes you.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

Clothing/accessories help me express who I am.
1   2   3   4   5

Shopping for clothing/accessories is fun.
1   2   3   4   5

The way I look in my clothing/accessories is important to me.
1   2   3   4   5

I have a lot to lose if I purchase something I don't like to wear.

1   2   3   4   5

My choice of clothing/accessories is relevant to my self-image.
1   2   3   4   5

Making a bad choice is something I worry about when shopping for clothing/accessories.
1   2   3   4   5

I enjoy experimenting with colors in clothing/accessories to create the best outfit.
1   2   3   4   5

I rate clothing/accessories as being a priority to me.
1   2   3   4   5

If the clothing/accessories I purchase do not have the quality I expect, I am upset.
1   2   3   4   5

More about You:

Please indicate the extent to which you agree or disagree with how well each statement describes you.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

Wearing my best clothing/accessories increases my self-confidence.
1   2   3   4   5

Choosing clothing/accessories is rather complicated.
1   2   3   4   5

I have an interest in clothing/accessories.
1   2   3   4   5

If, after I have bought clothing/accessories, my choice proved to be poor, I would be annoyed.
1   2   3   4   5

Clothing/accessories I wear allow others to see me as I would like them to see me.
1   2   3   4   5

When I buy clothing/accessories, I am never quite sure if I made the right choice or not.
1   2   3   4   5

I enjoy buying clothing/accessories.
1   2   3   4   5

Clothing/accessories are important to me.

1   2   3   4   5

Your Online Visiting Experience:

Please select answers based on your <u>online visiting experience</u>.

How often have you visited websites selling clothing/accessories over the past 6 months?

Every week   Every other week   Every month   Every 3 months   Every 6 months
Can not remember   Others (please specify):

What is the name of the website that sells clothing/accessories you visit most often?

Please think about the clothing/accessories website you visit most often. What makes you visit the website often? (Please choose <u>ALL</u> that apply.)
Pop-up advertisement
E-mail notification
Advertisement via media (e.g., magazine, newspaper, TV)
Mail advertisement or catalogs of the website
Using search engines of other websites (e.g., google, yahoo)
Others (please specify):

Have you ever had any online experience during which you wanted to buy a clothing/accessory item on impulse but decided not to purchase? If so, why? (Please choose <u>ALL</u> that apply.)
It was difficult to navigate the website.
Did not like the website design.
Did not like the product presentation.
Did not provide promotion/discount for the item.
Not enough product information
The item was too expensive.
No such experience
Others (please specify):

Have you ever visited a website selling clothing/accessories for any purpose other than buying a product? If so, what were the reasons? (Please choose <u>ALL</u> that apply.)
To compare brands or products
To check the price
Just for fun
To look for product information
To check the latest trends and products
To check if the product is available
No such experience
Others (please specify):

Your Evaluation of the Clothing/Accessory Website Where You Visit Most Often:

Please think about <u>the clothing/accessories website where you visit most often</u>. Please indicate the extent to which you agree or disagree with how well each statement describes the attributes of the website.
1 Strongly <u>Dis</u>agree
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

I could easily find what I wanted.
1 2 3 4 5

The website provided good discount.
1 2 3 4 5

The website showed images that coordinated different items.
1 2 3 4 5

Different screens came up quickly.
1 2 3 4 5

I could use a visual model on the website. (A virtual model is a 3-D model of a customer in order to let the customer virtually try on clothes/accessories to see how these items may look on the customer's body.)
1 2 3 4 5

The website provided good deal on shipping.
1 2 3 4 5

The website had an effective search function.
1 2 3 4 5

The website provided detailed policies for shipping and handling of the products.
1 2 3 4 5

The way products were presented was attractive.
1 2 3 4 5

The website gave up-to-date information about newly added products.
1 2 3 4 5

More about Your Website Evaluation:

Please think about you're <u>the website where you purchased the last clothing/accessory item</u> <u>you selected</u>. Please indicate the extent to which you agree or disagree with how well each statement describes the attributes of the website.
1 Strongly <u>Disagree</u>
2 Disagree
3 Neither Disagree nor Agree
4 Agree
5 Strongly Agree

I could get to the website quickly.
1   2   3   4   5

The website showed product colors that helped me to decide the color of the product that I should select.
1   2   3   4   5

Products were presented in an organized way.
1   2   3   4   5

The website gave detailed written descriptions of products.
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Average Monthly amount spent on clothing/accessories

$1 - $500 $501 - $ 1000 $1001 - $1500 $1501 - $2000 $2001 - $2500
$2501 - $3000   More than $3000

Your e-mail address

Table 1. Items Included in the Pilot Test Questionnaire but Removed from the Final Questionnaire

Factor	Removed Item
Apparel Involvement	Certain apparel items make me feel sure of myself.
	It is not a big deal if I make a mistake when purchasing apparel items.
	I enjoy buying apparel items.
	Having fashionable apparel is important to me.
	I carefully plan the accessories that I wear with my apparel.
Website Attributes	I could see 3D effects on the website.
	The website gave information about the fabrics of their products.
	The website showed images of a complete outfit.
	The website listed all the sizes available for each product.
	The screens were not cluttered.
	The website used sound to describe products.
	The website had a good deal on clearance.
	The website had good deal on sales.
	The website listed all the colors available for each product.
	The website played music
	I could get information from personal sales assistance by e-mail or 1-800 phone numbers.
	The website provided a "personal shopper" that suggested items and outfits that best suited my taste, style, and preferences.
	The website provided a "live chat" system that allowed me to talk or chat online directly with customer service representatives while shopping at the website.

Table 2. Items Included in the Final Questionnaire but Removed from the Data Analysis

Factor	Removed Item
Apparel Involvement	I enjoy experimenting with colors in clothing/accessories to create the best outfit.
	Clothing/accessories help me express who I am.
Website Attributes	I could get to the website quickly.
	Different screens came up quickly.
	The website had a size chart that helped me to decide the size of the product that I should select.
	The way products were presented was attractive.
	The website showed product colors that helped me to decide the color of the product that I should select.

Appendix E: Demographics of the Six Sample Universities

University Name	Geographical Region	Location	Size of the Campus	Number of Students
University of Rhode Island	New England	Kingston, Rhode Island	1,200 acre	15,095
Cornell University	Middle Atlantic	Ithaca, New York	745 acre	20,400
Virginia Polytechnic Institute and State University	South	Blacksburg, Virginia	2,600 acre	25,000
Kansas State University	Midwest	Manhattan, Kansas	668 acre	23,000
University of North Texas	Southwest	Denton, Texas	744 acre	32,000
Colorado State University	West	Fort Collins, Colorado	666 acre	25,000