

## Comparative Experimental Research on Product Evaluations and Approach Behaviors of Utilitarian and Hedonic Clothing in On-line and Off-line Settings

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### Abstract

This study explores the differences in product evaluation and approach behaviors as well as the effects of product evaluation on approach behaviors of utilitarian and hedonic products in on-line and off-line settings. A total of 332 subjects participated in the experiments to assess product evaluation and approach behaviors for utilitarian and hedonic clothing products in on-line and off-line settings. The results show that even though the same stimulus was presented, consumers' product evaluation of utilitarian clothing (i.e., t-shirts) was higher in the off-line setting than in the on-line setting while the approach behavior of hedonic clothing was better in the on-line setting than in the off-line setting. In addition, color was a crucial factor generating positive approach behaviors for utilitarian clothing while style and quality were core factors influencing the approach behaviors of hedonic products in an on-line setting. There was no consistency in the results of the important factors affecting approach behaviors of utilitarian and hedonic clothing in an off-line setting. The conclusion suggests implications for marketing based upon the results of this study.

**Key words:** Approach behavior, Utilitarian, Hedonic, On-line, Off-line

### I. Introduction

On-line market is estimated as 24 billion dollars, indicating more than 30% of increase in 2010 (Jung, 2010). In Korea, apparel item is ranked as the first in sales of on-line shopping malls. As the on-line shopping mall is rapidly increasing its marketshare in all over the world, a great deal of research was devoted to the exploration of consumer behaviors in on-line shopping malls.

Prior researchers focused on the effect of service factors on approach behaviors (e.g., attitude, buying intention, and/or estimated price) in on-line and off-line shopping malls. In terms of services, benefits in

on-line setting and off-line setting were more clarified. For example, an easiness of searching diverse products, no limitation of opening hours and travel distance to the mall, etc. have been considered as core benefits of on-line mall over off-line mall, while availability of personal services by sales people, possibility to try on, feel and touch, etc. have been regarded as main advantages of off-line mall over on-line mall. However, there was relatively less effort to explore which product attributes other than service factors may positively or negatively influencing consumer's approach responses. Approach responses can be defined as a composite of consumers' responses including attitude, behavioral intention, and behaviors toward something (Fiore et al., 2000). Although products sold in the on-line shopping mall would be the same as those sold in the off-line shopping mall, consumer perceptions of product attributes may not be same in two settings. There was little research investigating the effect of product

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attributes on approach behaviors by comparing on-line and off-line settings.

In recent days, many of on-line retailers are expanding their market to off-line stores while many off-line retailers are opening their web sites and on-line malls. As like this, there is no barrier between on-line retailers and off-line retailers as well as between on-line consumers and off-line consumers. Now, on-line and off-line shops are becoming alternatives of others along with competitors of others. In addition, consumers are suffering from time scarce in searching so many product options in on-line and off-line stores. At this moment, it would be very meaningful to figure out what product aspects would be better presented and better perceived in on-line and/or off-line stores.

Further, products can be categorized as utilitarian and hedonic products by the level of utilitarian and hedonic values perceived by consumers when they purchase and use the product (Hirschman & Holbrook, 1982). Since the expectations, benefits, and the level of guilt would be different by whether it is utilitarian or hedonic product (Park & Kim, 2010), these two product categories have been significantly considered in prior studies of consumer behaviors. Consumers want to compare diverse product attributes based on their values pursued and perceived in the process of making purchase decisions (Lee & Park, 2006). In this study, these two product categories will be tested to explore which product attributes are important in generating positive attitudes, increasing buying intention, and enhancing estimated price of the utilitarian and hedonic clothing products by comparison of products presented in on-line and off-line settings. These results may provide important implications for merchandisers and marketers in building strategies to better select and present clothing products in on-line and off-line stores.

## II. Literature Review

### I. Clothing Product Attributes

Product is the most essential component influencing satisfaction of needs, therefore, product takes a crucial role in the marketing mix strategies (Lee & Yoo, 2004). Specifically, attributes of clothing prod-

uct has been considered as key factors in making a purchase decision (Abraham-Murali & Littrell, 1995; Koh, 1994). Prior researchers (Eckman et al., 1990; Richardson et al., 1994) indicated that product attributes are composed of intrinsic and extrinsic attributes. Intrinsic attributes of product such as color, texture, and style may not be changed without altering the product itself. Extrinsic attributes are price, brand name, advertisement, etc. added by makers or developers (Hines & O'Neal, 1995). Zeithmal (1988) suggested that intrinsic attributes are more important in consumption situation. Olson and Jacoby (1972) also stated that intrinsic attributes are significant in evaluation of clothing attributes. Principal intrinsic attributes of clothing product are color, style, texture, textile, and quality (Ahn & Lee, 1997; Lee, 1995), hence, product attributes focusing on these key intrinsic attributes are explored in this study.

### 2. Buying Decision of Utilitarian and Hedonic Products

Hirschman and Holbrook (1982) indicated that consumers have utilitarian and hedonic values in consumption, thus, products also can be categorized as utilitarian and hedonic products based on the level of utilitarian and hedonic values perceived by buying and using of the product (Okada, 2005). Many researchers (Kivetz & Simonson, 2002; Preloc & Lowenstein, 1998; Sela et al., 2009) divided products as utilitarian and hedonic products based on features of the product and used those for a factor predicting diverse consumers' responses. Utilitarian products would be evaluated by the extent of its functional benefits (Strahilevitz & Myers, 1998) whereas hedonic products would be assessed depending on the pleasure and fantasy obtained from the product (Batra & Ahtola, 1990). Luxury goods are often categorized as hedonic products while necessities are considered as utilitarian products (Kivetz & Simonson, 2002).

Consumers feel more guilty when they purchase hedonic products than utilitarian products (Kivetz & Simonson, 2002; Preloc & Lowenstein, 1998), so people try to find out specific needs or benefits for the justification of purchasing hedonic products (Simon-

son, 1992). On the other hand, consumption of utilitarian products would tend to be further related to rational and planned behaviors while consumption of hedonic products would be more subjective and personal in relation to pursuing fun and pleasure out of shopping (Sherry, 1990). Recognizing different characteristics of utilitarian and hedonic products, the effects of utilitarian and hedonic product attributes on approach responses would be explored.

### **3. Effect of Products Attributes on Approach Behaviors in On-line and Off-line Settings**

It has been an interesting issue in figuring out which product attribute affects on approach behaviors such as attitude, buying intention, or estimated price. Approach behaviors are considered as a composite of consumers' responses including their feelings, and behavioral intention, and behaviors toward something (Fiore et al., 2000). Park and Lee (2009) indicated that product attributes affecting approach responses in on-line and off-line stores were inconsistent by summarizing prior research. Specifically, style, quality and color of clothing were or were not considered as crucial attributes in some on-line and off-line research (Chang, 2004; Cho et al., 2001; Oh & Huh, 1995). Chang (2004) compared the importance of product attributes in decision making for clothing product in on-line setting. In this study, textile design, color and quality were important aspects of products for on-line clothing purchase. Cho et al. (2001) found that design is the product attribute considered most importantly in clothing purchase decision in on-line shopping mall. These results were based on data obtained through survey about their shopping experiences.

Some researchers indicated that information of design and texture of clothing products is not sufficient in on-line shopping mall (Kim & Kim, 2001; Yang & Chun, 2000). Also, the texture is the product aspect which is most different between the real image and on-line image (Kim & Choi, 2002; Lee & Park, 2004). Interestingly, some researchers (Kim & Cho, 2007a, 2007b) found that people more positively evaluate textures in on-line than in off-line setting, reflecting positivity bias of people when information is not enough.

The above inconsistent results may be attributed to the fact the most previous studies were conducted on-line and off-line setting separately, which limits in comparing product attribute evaluation between on-line and off-line (Kim et al., 2007; Park & Lee, 2005). Recently, as an increasing number of off-line stores are selling their products using on-line malls, on-line shopping can be an alternative of off-line store shopping for consumers. Consequently, it would be very important to discover which aspect of clothing would be significantly affecting attitude, buying intention, and estimated price. On-line and off-line setting might have their own benefits, thus, each setting might be more appropriate for presenting certain aspects of products. In this study, these issues would be dealt with by comparing clothing products in on-line and off-line settings.

### **4. Research Problem and Hypotheses**

Based on the discussion above, the following research problem and hypotheses were developed.

#### ***1) Research Problem 1.***

Explore whether there is a difference in product evaluation and approach behaviors of utilitarian and hedonic clothing between on-line and off-line settings.

H 1-1. There is a difference in product evaluation of utilitarian clothing between on-line and off-line settings.

H 1-2. There is a difference in product evaluation of hedonic clothing between on-line and off-line settings.

H 1-3. There is a difference in approach behaviors of utilitarian clothing between online and off-line settings.

H 1-4. There is a difference in approach behaviors of hedonic clothing between on-line and off-line settings.

#### ***2) Research Problem 2.***

Explore whether there is a difference in the effect of product evaluation on approach responses of utilitarian and hedonic clothing between on-line and off-line settings.

- H 2-1. There is a difference in the effect of product evaluation on approach responses of utilitarian clothing between on-line and off-line settings.
- H 2-2. There is a difference in the effect of product evaluation on approach responses of hedonic clothing between on-line and off-line settings.
- H 2-3. There is a difference in the effect of product evaluation on approach responses in on-line settings between utilitarian and hedonic products.
- H 2-4. There is a difference in the effect of product evaluation on approach responses in off-line settings between utilitarian and hedonic products.

### III. Research Methods

#### 1. Stimulus and Process of Experimental Research

A total of 332 participated in the experiments with utilitarian and hedonic clothing. T-shirt and sleepwear were selected as the most appropriate ones out of 10 clothing items each representing utilitarian and hedonic clothing in the pre-tests with 10 specialists in the fashion-related fields. In result, t-shirt was selected as a stimulus for utilitarian clothing while sleepwear was selected as a stimulus for hedonic clothing. Color of items was decided as white in order to reduce color preference of individuals and to lessen the possibility to be shown as a different color by a projector. In order to select t-shirt and sleepwear stimulus, item samples that are currently being sold in on-line shopping malls were reviewed, thus, 10 t-shirt and 10 sleepwear items were selected as a considerable set based on the results of pre-tests asking about perceptions of hedonic and utilitarian values toward each item. In result, white cotton round-neck t-shirts and white satin sleepwears for man and woman were purchased. In the on-line and off-line experimental setting, the same t-shirt and sleepwear were used. To develop on-line setting stimulus, an internet shopping mall page was developed with minimal product information including a picture of dressed male and female models together. Written infor-

mation was limitedly provided in the web page by indicating the name of product (i.e., t-shirt, sleepwear), and color name (i.e., white), and size options. Product picture in the web page was provided after removing the image of face. To develop off-line setting stimulus, actual simple window display with dressed body forms of male and female was prepared with simple lighting.

Between-subjects-experiments had 2 (utilitarian product, hedonic product)  $\times$  2 (on-line, off-line) structure. In 10 different college courses, participants for experiments were recruited based on their willingness to participate. Volunteered male and female college students were allocated to one of the four different experimental groups based on their convenience on time and place for an experiment. Seventy five and 117 were allocated for on-line and off-line setting of utilitarian clothing while 65 and 75 were allocated for on-line and off-line setting of hedonic clothing.

For on-line setting experiment, subjects were asked to watch a web site page projected in the screen while filling out the questionnaire in the classroom. In the on-line setting, subjects were allowed to watch one static screen, not being able to scroll the web-page and surf other site, etc. For off-line setting experiment, subjects were asked to watch a display in a showcase set up in the corner of the lobby of a university building while filling out the questionnaire. Subjects were not allowed to touch the garment, rather just watch a display through a glass window. This modification was applied to maintain the balance in behavioral restrictions given to subjects between on-line and off-line settings. Usually, 4-5 students were allowed to observe the window display at one time.

A questionnaire was developed including questions asking about: 1) product evaluation on color, texture, textile, style and quality, 2) approach behaviors including attitude, buying intention, and estimated price, 3) attitude toward experimental stimulus, and 4) informant characteristics including demographics and shopping behaviors. Product evaluation items were developed based on general items used in the prior research (Lee & Park, 2006). A single item was used to assess each color, texture, textile, style and quality, (i.e., "Color of the presented product was attractive", "Textile of

the presented product was appropriate”) with 6-point Likert scales anchored by “strongly agree” (6) to “strongly disagree” (1). As items asking about approach behaviors, attitude toward the stimulus, and shopping behaviors were modified from the scales used in Fiore et al. (2000). Attitude toward the product was measured with four semantic differential scales (i.e., The presented product is bad-good, undesirable-desirable, use-lessbeneficial, and negative-positive). Buying intention was assessed with one item as “I have an intention to purchase the presented item in one year” with 6-point Likert scales anchored by “strongly agree” (6) to “strongly disagree” (1). Responses on estimated price were obtained with an open-end question which is “What is the highest price that you are willing to pay for the product if you purchase?”. Average age of subjects were 21 years old; and female subjects were 197 (59%) of the total. Data were analyzed by the descriptive analysis, cross-tabulation, *t*-test, and ANOVA, and MANOVA.

## 2. Stimulus Checks

In the experimental setting, it was checked whether there are some differences in each group response on attitude toward stimulus and shopping behaviors since those may affect the results. In the ANOVA and cross-tabulation result, age ( $F=2.00$ ;  $p=.114$ ) and gender

(Chi-square=6.085;  $p=.108$ ) was not different by group. As summarized in <Table 1>, Pillai's *T* indicated there was no group difference in attitude toward stimulus and shopping behaviors. Specifically, preferences for white color, sleepwear, t-shirt, and presented product as well as money spent on clothing, number of t-shirt and sleepwear purchased in a month were not different by group. It implies that stimulus manipulation was appropriate so the study results may depend heavily on the difference of stimulus feature by each group. In addition, the result indicates the number of t-shirt purchased in a month was more than 11 in average while the number of sleepwear purchased in a month was less than one in average, presenting a big difference in purchase experience in stimulus.

## IV. Results and Discussion

### 1. Product Evaluation and Approach Behaviors in On-line and Off-line Settings

Research hypotheses 1-1 through 1-4 were tested by comparing product evaluation and approach behaviors of on-line and off-line settings for utilitarian and hedonic clothing products. As indicated in <Table 2>, for utilitarian clothing, product evaluation was but approach behaviors was not different between on-line and off-line settings when referring to Pillai's *T*

**Table 1. Checks of participants' commonalities and appropriateness of stimulus**

Stimulus	Item	On-line T-shirt Group		Off-line T-shirt Group		On-line Sleepwear Group		Off-line Sleepwear Group		t-value	p-value	Pillai's <i>T</i> (F-value)
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.			
Attitude Toward Stimulus	I like white color.	4.45	1.23	4.42	1.25	4.35	1.33	4.32	1.40	.167	.919	.903
	I like sleepwear.	3.47	1.38	3.14	1.35	3.25	1.31	2.87	1.40	2.558	.055	
	I like t-shirt.	4.84	0.83	4.93	0.77	4.83	1.01	4.97	0.82	.502	.681	
	Presented product was good.	3.04	1.09	3.08	1.07	3.03	1.12	3.17	1.16	.257	.856	
Clothing Shopping Behaviors	Money spending on clothing (Won/Month)	193800	158103	174960	131586	157110	10518	167200	135956	.943	.420	1.174
	Money spending on clothing via Internet (Won/Month)	101690	104839	82050	81092	61020	61020	76670	91098	2.676	.047*	
	Number of t-shirt purchased in a month	11.60	9.13	11.25	7.76	11.19	10.61	12.23	12.99	2.022	.111	
	Number of sleepwear purchased in a month	.89	.94	.81	1.02	.57	.83	.61	.91	.179	.911	

\* $p<.05$

Table 2. Product evaluation and approach behaviors in on-line and off-line settings

Stimulus	Category	Item	On-line		Off-line		<i>t</i> -value	<i>p</i> -value	Pillai's <i>T</i> ( <i>F</i> -value)
			Mean	S.D.	Mean	S.D.			
Utilitarian Product (T-shirt)	Product Evaluation	Attractiveness of color	2.62	1.358	2.52	1.126	.568	.570	4.614**
		Attractiveness of texture	2.69	1.184	3.05	1.238	-2.033	.043*	
		Appropriateness of textile	3.08	1.265	3.45	1.118	-2.169	.031*	
		Attractiveness of style	2.34	1.154	2.15	1.019	1.220	.224	
		Good quality	2.67	1.155	3.16	1.137	-2.930	.004**	
	Approach Behavior	Attitude	3.70	0.969	3.70	0.800	-.009	.993	.077
		Buying intention	2.72	1.353	2.72	1.231	.030	.976	
		Estimated price	6322.08	5003.730	6029.06	4480.460	.425	.671	
Hedonic Product (Sleep wear)	Product Evaluation	Attractiveness of color	2.83	1.387	3.21	1.119	-1.806	.073	1.577
		Attractiveness of texture	4.32	1.187	4.19	1.023	.730	.466	
		Appropriateness of textile	3.89	1.106	4.08	0.983	-1.063	.290	
		Attractiveness of style	3.00	1.369	3.11	1.060	-.519	.605	
		Good quality	3.94	1.116	3.96	0.965	-.122	.903	
	Approach Behavior	Attitude	4.08	0.918	4.03	0.703	.398	.691	4.747**
		Buying intention	2.37	1.306	2.61	1.077	-1.212	.228	
		Estimated price	31363.08	18654.120	22450.14	12507.600	3.343	.001**	

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

( $F=4.614^{**}$ ). Specifically in the *t*-test result, attractiveness of texture, appropriateness of textile, and quality were perceived better in off-line setting than in on-line setting for t-shirt. It may imply that consumers may better evaluate attractiveness of texture, appropriateness of textile, and quality in off-line stores than in on-line shopping malls. This result was contradictory to Kim and Cho's (2007a, 2007b) findings, revealing an enhanced evaluation on texture in on-line setting rather than in off-line setting. The difference may be caused by the experimental situation not allowing subjects to touch the garment. There was no difference in attitude and buying intention, and estimated price of utilitarian product between on-line and off-line settings.

On the contrary, for hedonic clothing, product evaluation was not but approach behaviors was different between on-line and off-line settings when referring to Pillai's *T* ( $F=4.747^{**}$ ). In the *t*-test result, estimated price was much higher in on-line setting than in off-line setting. In observation of this result, it can be inferred as consumers may have more fantasy when they evaluate hedonic products in on-line setting than in off-line setting, thus, it may contribute to enhancing

the estimated price. According to Song et al. (2007), fantasy entails the pleasurable mental imagery involving product use. Fantasy can be evoked in on-line stores, positively engaging in shopping enjoyment and some of approach behaviors through the on-line stores (Song et al., 2007). Also, relatively little experience in purchasing the sleepwear of the subjects compared to t-shirt may make subjects hard to estimate prices. Based on these results, hypotheses 1-1 and 1-4 were supported while 1-2 and 1-3 were rejected.

## 2. The Effect of Product Evaluation on Approach Behaviors

Before conducting multiple regression analyses, VIF was checked for each equation. The value of VIF was ranged from 1.517 to 3.317 for each equation, confirming there is no multi-collinearity problem, thus, all equations are testable through the regression analysis. In <Table 3>, the effects of product evaluation on attitude toward utilitarian product and hedonic product were significant ( $p < .001$ ), however, the product aspects influencing attitudes were different by on-

**Table 3. Product evaluation affecting attitude in on-line and off-line settings**

Independent Variable \ Dependent Variable	Attitude							
	Utilitarian Product-T shirt				Hedonic Product-Sleepwear			
	On-line (N=75)		Off-line (N=117)		On-line (N=65)		Off-line (N=75)	
	Std. $\beta$	t-value	Std. $\beta$	t-value	Std. $\beta$	t-value	Std. $\beta$	t-value
Attractiveness of color	.343	2.203*	.305	2.706**	.145	1.111	.260	1.844
Attractiveness of texture	-.079	-.402	-.009	-.066	.010	.071	.132	.901
Appropriateness of textile	.204	1.168	-.004	-.041	.378	2.884**	-.146	-1.008
Attractiveness of style	-.046	-.290	.127	1.336	.302	2.351*	.191	1.363
Good quality	.227	1.415	.343	3.459**	-.002	-.014	.226	1.918
F-value	6.769***		14.205***		7.609***		6.427***	
Adj. R <sup>2</sup>	.280		.363		.341		.268	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

line and off-line settings. For utilitarian product, attractiveness of color was an important factor affecting attitude toward product in on-line setting though good quality was another important factor influencing attitude toward product in off-line setting. For hedonic product, appropriateness of textile and style affected attitude toward hedonic product in on-line setting.

As summarized in <Table 4>, the effects of product evaluation on buying intention toward utilitarian product were significant ( $p < .001$ ), however, the influence of product evaluation in on-line setting but not in off-line setting was observed for hedonic products. Specifically, attractiveness of color was important in the utilitarian product, on the other hand, attractiveness of style and good quality of product increased buying

intention in on-line setting.

Finally, when we run regression analysis on estimated price as summarized in <Table 5>, attractiveness of color and texture were critical factors increasing estimated price of utilitarian products in on-line setting, but no specific factor affecting estimated price of utilitarian product in off-line setting was observed. For hedonic products, attractiveness and quality were important factors affecting estimated price in on-line setting, however, only the quality was factor influencing estimated price of products in off-line setting.

It is concluded that color is more crucial factor affecting approach behaviors toward utilitarian products in on-line setting, whereas style and quality are more significant in approach behaviors toward hedonic prod-

**Table 4. Product evaluation affecting buying intention in on-line and off-line settings**

Independent Variable \ Dependent Variable	Buying Intention							
	Utilitarian Product-T shirts				Hedonic Product-Sleepwear			
	On-line (N=75)		Off-line (N=117)		On-line (N=65)		Off-line (N=75)	
	Std. $\beta$	t-value	Std. $\beta$	t-value	Std. $\beta$	t-value	Std. $\beta$	t-value
Attractiveness of color	.532	3.399*	.164	1.271	.078	.553	-.024	-.143
Attractiveness of texture	.005	.024	.012	.082	.195	1.359	.271	1.570
Appropriateness of textile	-.054	-.310	-.030	-.276	.266	1.888	-.053	-.310
Attractiveness of style	.039	.244	.184	1.695	.363	2.623*	-.001	-.004
Good quality	.075	.466	.216	1.902	.419	2.761**	.044	.319
F-value	6.746***		5.639***		4.982***		.876	
Adj. R <sup>2</sup>	.282		.167		.237		-.008	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 5. Product evaluation affecting estimated price in on-line and off-line settings

Independent Variable \ Dependent Variable	Estimated Price							
	Utilitarian Product-T shirts				Hedonic Product-Sleepwear			
	On-line (N=75)		Off-line (N=117)		On-line (N=65)		Off-line (N=75)	
	Std. $\beta$	t-value	Std. $\beta$	t-value	Std. $\beta$	t-value	Std. $\beta$	t-value
Attractiveness of color	.493	3.015**	.164	1.271	.078	.553	-.001	-.007
Attractiveness of texture	.580	2.815**	.012	.082	.195	1.359	-.231	-1.462
Appropriateness of textile	-.221	-1.207	-.030	-.276	.266	1.888	.099	.848
Attractiveness of style	.266	1.614	.184	1.695	.363	2.623*	.115	.998
Good quality	.195	1.152	.216	1.902	.419	2.761**	.331	2.748**
F-value	6.746***		5.639***		4.855***		2.533*	
Adj. R <sup>2</sup>	.282		.167		.207		.062	

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

ucts in on-line settings. This result expands prior findings (Cho et al., 2001) addressing the importance of design in clothing purchase through on-line shopping mall. Referring to the finding of this study, it can be said that design (style) would be further imperative in purchase decision in on-line mall when the product is a hedonic item. In addition, while observing low adjusted  $R$  square, it is assumed there would be other factors than product aspects significantly influencing buying intention and estimated price of hedonic products in off-line settings. Based on these results, hypotheses 2-1 through 2-4 were supported.

## V. Conclusions

In the present study, it was explored: 1) the difference in product evaluations and approach behaviors, and 2) the difference in the effects of product evaluations on approach behaviors of utilitarian and hedonic clothing products between on-line and off-line settings. Experimental results with 332 subjects indicated that product evaluation of utilitarian clothing product (i.e., t-shirt) was different, however, approach behaviors of utilitarian clothing product was not different between on-line and off-line settings. On the contrary, approach behaviors of hedonic clothing product was different while product evaluation of hedonic clothing product was not different between on-line and off-line settings. Specifically, consumers perceived utilitarian products as those with more attractive texture, more appropriate textile, and better quality when those were pre-

sented in off-line setting than in on-line setting. However, approach behaviors including attitude, buying intention, and estimated price were not different between on-line and off-line settings. Consumers estimated price for hedonic products (i.e., sleepwear) higher when it was presented in on-line setting than in off-line setting.

The result regarding the response difference in texture evaluation between in on-line and off-line settings were inconsistent with prior research (Kim & Choi, 2002; Lee & Park, 2004). Difference in texture perception was found only in the case of utilitarian product. Moreover, differently from prior study (Kim & Cho, 2007a, 2007b), people evaluated textures more positively in off-line than in on-line setting. In the case of hedonic products, it may not be different in evaluation of each aspect of product, however, other factors such as fantasy or fun besides these product aspects might positively affect increasing the estimated price of product. However, in the evaluation of utilitarian products, people might more thoroughly examine the product and elaborate the evaluation process (Cacioppo et al., 1984), therefore, they might generate better evaluation in off-line since they could have more cues in off-lines than in on-lines. In this evaluation process of utilitarian products, fantasy or pleasure might not be likely to intervene in the process of attribute evaluation, therefore, no difference in approach responses were found.

Also, in the  $F$ -value observation of regression analyses, product evaluations significantly affected approach responses of utilitarian products in on-line/off-line



and of hedonic products in on-line setting, however, these results were inconsistent with hedonic products in off-line settings. In summary, color was a factor generating positive attitude, increasing buying intention, and enhancing estimated price of utilitarian product (t-shirt) in on-line setting. However, color and quality were critical factors affecting attitudes of utilitarian products in off-line setting. On the other hand, texture, style or quality were focal factors affecting approach behaviors of hedonic products in on-line setting but quality is only a factor increasing estimated price of hedonic product in off-line setting. Based on the result, it is assumed that in on-line settings color is an important factor affecting approach behaviors of utilitarian products but style is more important for hedonic products in on-line settings. Generally, more product attribute factors are related to buying intention and estimated prices in on-line than in off-line settings for both utilitarian and hedonic products.

Pain on the payment may reduce a pleasure obtained while looking at the product, it is more severe in the case of hedonic product (Preloc & Lowenstein, 1998), therefore, when people examine hedonic clothing in on-line setting, they might want to build more positive fantasy on quality or style in order to justify their purchase decisions. Ultimately, it may result in imaging the higher price on the hedonic product.

On the other hand, we can explain the result based on the difference of experience in each clothing item. Prior researchers indicated that consumers' attitude and behaviors would be different by the level of experience (Fenech & O'Cass, 2001). T-shirt is one of the most commonly purchased item through the Internet (Kim, 2008; Park & Lee, 2009; Seo, 2008) and actually subjects had more experiences in purchasing t-shirt than sleep-wear. When people have a certain level of experiences in purchase and use of a clothing item, their subjective knowledge might influence evaluation and approach responses (Park & Lessig, 1981). Therefore, subjects might confidently evaluate the product based on the most prominent visual key which is color. Specifically, people tend to depend more on extrinsic cues such as price when they are lack of knowledge processing product information (Petty et al., 1981; Richardson et al., 1994). Therefore, it can be assumed that

people who are lack of knowledge on sleepwear might try to evaluate the product based on more holistic cues such as quality since they are not confident in evaluating this item.

Based on these results, some marketing implications can be generated. Consumers can evaluate texture, textile and quality better in off-lines for basic and low-priced utilitarian items than in on-lines when good atmosphere in off-line store positively affects evaluation of product attributes. Also, infrequently purchased clothing items generating fantasy and pleasure, might be effective items when presented in on-line settings since on-line mall might better embrace consumers' fantasy and imagination. Specifically for hedonic items purchased for a gift might be a good item sold in on-line site. Also, on-line retailers selling basic, low-priced, and utilitarian items may consider more about attractive color presentation in computer screen while on-line retailers selling not-often purchased and hedonic items may want to concentrate on the style and quality aspects of the product in the way of presenting the product on-line. Further, referring from the result of highly estimated price of the sleepwear, price might work as a key to assess the quality in the case consumers do not have much experience in the item, therefore, low price or discount may not always be a good pricing strategy for the item.

This research has some limitations. A convenient sample of students participated in the experiment, so their responses may not fully reflect general consumers' responses. Although t-shirt and sleepwear were selected as representative items of the utilitarian and hedonic products through pre-tests, perceptions on whether those are the most representative items of those categories may be varied. In the future studies, more diverse clothing items can be tested in the category of utilitarian and hedonic products. In other viewpoints, behavioral restrictions given in the on-line and off-line experiments (e.g., not allowing scroll and surf in on-line or not allowing touch the garment in on-line) may cause a difference from the real retail setting although those restrictions were applied to clearly compare the research variables. In the future, those comparative research conducted in the real retail setting may provide diverse implications. Also, both the intrinsic and

extrinsic cues can be tested as factors predicting approach behaviors in the future study.

## References

- Abraham-Murali, L., & Littrell, M. A. (1995). Consumers' perception of apparel quality over time. *Clothing and Textiles Research Journal*, 13, 149-158.
- Ahn, S. H., & Lee, K. H. (1997). Consumer shopping orientation toward foreign brands (Part II)-In the context of clothing involvement, ethnocentrism and country-of-origin effects-. *Journal of the Korean Society of Clothing and Textiles*, 21(4), 699-709.
- Batra, R., & Ahtola, O. T. (1990). Measuring the hedonic and utilitarian sources of consumer attitudes. *Marketing Letters*, 2(2), 159-170.
- Cacioppo, J. T., Petty, R. E., & Kao, C. F. (1984). The efficient assessment of need for cognition. *Journal of Personality Assessment*, 48(3), 306-307.
- Chang, J.-I. (2004). *Selection of on-line and/or off-line channels of the consumers during the purchase decision making process for apparel*. Unpublished master's thesis, Seoul National University, Seoul.
- Cho, Y. J., Lim, S. J., & Lee, S. H. (2001). Apparel purchase behavior among internet shoppers-Focusing on perceived risks-. *Journal of the Korean Society of Clothing and Textiles*, 25(7), 1247-1257.
- Eckman, M., Damhorst, M. L., & Kadolph, S. J. (1990). Toward a model of the in-store purchase decision process: Consumer use of criteria for evaluating women's apparel. *Clothing & Textiles Research Journal*, 8(2), 13-22.
- Fenech, T., & O'Cass, A. (2001). Internet users' adoption of web retailing: User and product dimensions. *Journal of Product & Brand Management*, 10(6), 361-381.
- Fiore, A. M., Yah, X., & Yoh, E. (2000). Effects of a product display and environmental fragrancing on approach responses and pleasurable experiences. *Psychology & Marketing*, 17(1), 27-54.
- Hines, J. D., & O'Neal, G. S. (1995). Underlying determinants of clothing quality: The consumers perspective. *Clothing and Textiles Research Journal*, 13(1), 227-233.
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, method, and propositions. *Journal of Marketing*, 46(3), 92-101.
- Jung, Y. J. (2010, 12. 10). Internet shopping mall in the next year, severe competition in discount stores. *Digital Times*. Retrieved December 15, 2010, from <http://news.nate.com/view/20101210n03423>
- Kim, H., & Cho, S. (2007a). The comparison of subjective evaluation of hand between on-line and off-line by structure and sensibilities of fabric. *Korean Association of Human Ecology*, 13(5), 787-798.
- Kim, H., & Cho, S. (2007b). The comparison of subjective evaluation of hand between on-line and off-line by structure and sensibilities of fabric. *Journal of the Korean Society of Clothing and Textiles*, 31(1), 1-10.
- Kim, M. S., & Kim Y. S. (2001). Consumer satisfaction/dissatisfaction factors for internet fashion shopping malls. *Journal of the Korean Society of Clothing and Textiles*, 25(7), 1353-1364.
- Kim, S. H., & Choi, H. (2002). A study of the usage and sizing selecting of the apparels listed in on-line and catalog shopping. *Journal of the Korean Society of Clothing and Textiles*, 26(7), 1015-1025.
- Kim, S-H., Park, G-Y., & Park, H. J. (2007). Factors influencing buyers' choice of online vs. offline channel at information search and purchase stages. *Distribution Research*, 12(3), 69-90.
- Kim, Y. K. (2008). *A study on the purchasing behavior of clothing products in internet shopping malls: Focusing on stimulus factors of impulse purchase*. Unpublished master's thesis, Ewha Womans University, Seoul.
- Kivetz, R., & Simonson, I. (2002). Earning the right to indulge: Effort as a determinant of customer preferences toward frequency program rewards. *Journal of Marketing Research*, 39(May), 155-170.
- Koh, A. R. (1994). Consumer intention to purchase domestic/foreign brand jeans: Beliefs, attitude, and individual characteristics. *Journal of the Korean Society of Clothing and Textiles*, 18(2), 263-272.
- Lee, J. R., & Yoo, D. K. (2004). *The effect of web interactivity of e-brand on relationship quality and customer loyalty*. Unpublished master's thesis, Sejong University, Seoul.
- Lee, J.-Y., & Park, J.-O. (2006). The effect of consumer's objective knowledge, subjective knowledge and involvement of apparel on product attribute evaluation. *Journal of the Korean Society of Clothing and Textiles*, 30(5), 818-828.
- Lee, K. H., & Park, J.-O. (2004). Criteria of evaluating clothing and web service on internet shopping mall related to purchase experience. *Journal of the Korean Society of Clothing and Textiles*, 28(5), 603-614.
- Lee, Y. (1995). *Consumer's brand orientation toward apparel products*. Unpublished master's thesis, Seoul National University, Seoul.
- Oh, J. M., & Huh, K. S. (1995). A study on the development of jeans via conjoint analysis. *Journal of the Korean Society of Clothing and Textiles*, 19(3), 448-462.
- Okada, E. M. (2005). Justification effects on consumer choice of hedonic and utilitarian goods. *Journal of Marketing Research*, 42(February), 43-53.
- Olson, J. C., & Jacoby, J. (1972). Cue utilization in the quality perception process. *Proceedings of the Third Annual*

- Conference of the Association for Consumer Research, USA*, 167–179.
- Park, C. W., & Lessig, V. P. (1981). Familiarity and its impact on consumer decision biases and heuristic. *Journal of Consumer Research*, 8, 223–237.
- Park, H. N., & Lee, K. H. (2009). Market segmentation of online apparel buyers base on attribute evaluations in choice sets. *Journal of the Korean Society of Clothing and Textiles*, 33(7), 1086–1097.
- Park, S., & Kim, M.-Y. (2010). The influence of purchase quantity and timing on consumer choice between hedonic and utilitarian options. *Journal of Korean Marketing Association*, 25(3), 137–168.
- Park, S. Y., & Lee, J.-Y. (2005). The analysis of on-line product categories based on consumer segmentation characteristics. *Distribution Research*, 10(1), 59–84.
- Petty, R. E., Cacioppo, J. T., & Goldman R. (1981). Personal involvement as determinant of argument-based persuasion. *Journal of Personality and Social Psychology*, 41, 847–855.
- Preloc, D., & Lowenstein, G. (1998). The red and the black: Mental accounting of saving and debt. *Marketing Science*, 17(1), 4–28.
- Richardson, P. S., Dick, A. S., & Jain, A. K. (1994). Extrinsic and intrinsic cue effects on perceptions of store brand quality. *Journal of Marketing*, 58, 28–36.
- Sela, A., Berger, J., & Liu, W. (2009). Variety, vice, and virtue: How assortment size influences option choice. *Journal of Consumer Research*, 35(April), 941–951.
- Seo, M. S. (2008). *Influence of online word of mouth information on attitudes toward fashion goods*. Unpublished master's thesis, Hanyang University, Seoul.
- Sherry, J. F. (1990). Dealers and dealing in a periodic market: Informal retailing in ethnographic perspective. *Journal of Retailing*, 66(2), 174–200.
- Simonson, I. (1992). The influence of anticipating regret and responsibility on purchase decisions. *Journal of Consumer Research*, 19(June), 105–118.
- Song, K., Fiore, A. M., & Park, J. H. (2007). Telepresence and fantasy in online apparel shopping experience. *Journal of Fashion Marketing and Management*, 11(4), 553–570.
- Strahilevitz, M., & Myers, J. G. (1998). Donations to charity as purchase incentives: How well they work may depend on what you are trying to sell. *Journal of Consumer Research*, 24(March), 434–446.
- Yang, Y. Y., & Chun, J. S. (2000). Consumer's perception on apparel products in catalog shopping, TV home shopping and Internet shopping. *Journal of the Korean Society of Clothing and Textiles*, 24(8), 1137–1145.
- Zeithmal, V. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(July), 2–22.