

*Wen-Wei Yen* \*

## **WHY ARE THE WARNING LABELS ON HEDONIC FASHION PRODUCTS INEFFECTIVE? TWO EXPERIMENTS ON HAIR DYING AND PERM SERVICES**

---

---

This study contributes to the clarification of the effects of hedonic fashion products' involvement in the failure of self-regulation. Two experimental studies on hair dying and perm services which can be regarded as hedonic consumption, were carried out. The results reveal that the level of product involvement is inversely related to the effective level of self-regulation, which is mediated by consumption inertia, not by expertise. Warning labels are effective only for consumers with a low level of product involvement. Based on the findings, some recommendations for policy makers and marketers are proposed.

**Keywords:** hedonic consumption, product involvement, self-regulation, warning label  
**DOI:** 10.15611/aoe.2014.2.05

### **1. INTRODUCTION**

Although hedonic consumption can bring spiritual excitement or sensual pleasure, it may harm our health physically or psychologically if consumed excessively or incessantly (Herman, Polivy 2010, Quinn, Fromme 2010). Hedonic consumption is sometimes also regarded as an impulsive behaviour that consumers should avoid to eliminate regrets after a purchase (Wertenbroch 1988, Baumeister 2002) or to reduce physical/psychological harm (Wertenbroch 1988, Quinn, Fromme 2010; Heatherton 2011). As such, many advocate groups have pushed policy makers to enforce warning labels on hedonic products (Torres, Sierra, Heiser 2007) not only informing consumers about potential risks, but also advising them to self-regulate their excessive consumption. Unfortunately, the warning labels of hedonic products seem ineffective (e.g. Strahilevitz, Myers 1998, Stockley 2001, Kempf, Harmon 2006, Davis, 2000, Heatherton 2011).

Hair dyes and perm solutions, whether sold in drug stores or used by hairdressers in salons, are in general within the category of fashion hedonic products. Regardless of the brands, the warning labels of such a fashion

---

\* Chungyu Institute of Technology, Keelung, Taiwan

hedonic product category may state that “the harmful chemicals may irritate delicate skin and hair, and give off fumes that can cause nausea, eye irritation, and other problems,” that “the chemicals contain ammonia, quaternium-15 that can release formaldehyde,” and that “the ingredients contain phenylenediamine (PPD) that may be carcinogenic.” Apparently many ‘hair fashion lovers’ constantly use hair dying or perm services; some of them may be addicted or even become fashion victims. Here arises an immediate question: “Is this because fashion hair lovers do not understand the potential harm of the excessive use of such products? Or do they understand it so well as to have become expert, but their self-regulation abilities are rendered ineffective by high consumption inertia?” Answering this question is not easy, it requires sufficient evidence. Despite considerable research devoted to self-regulation failures on hedonic consumption, the conclusion about how product involvement would affect self-regulation failures and how consumption inertia or product knowledge (expertise) would influence product involvement is still inconclusive (e.g. Gómez, Arranz, Cillán 2006, Taylor-West, Fulford, Reed, Story, Saker 2008, Vale, Pieters, Zeelenberg 2008).

According to Vale, Pieters and Zeelenberg (2008), self-regulation failures mainly stem from the lack of sufficient product awareness (insufficient self-awareness) or the misunderstanding of products (incorrect product knowledge). In other words, consumers may be either too involved or insufficiently involved with the hedonic products. Some researchers (e.g. Zaichkowsky 1985, Ronis, Yates, Kirscht 1989, Garling, Garvill 1993, Kim 2005) indicate that high product involvement tends to bring high consumption inertia, which would result in repetitive consumption behaviour and eventually undermines one’s ability to make rational decisions. When consumption inertia suppresses one’s self-awareness or the warning labels’ efficacy, self-regulation failures would occur. However, other researchers (e.g. Petty, Cacioppo, Goldman 1981, Alba, Hutchinson 1987, Park, Moon 2003, Chandrashekar 2004, Yoon, Choi 2005) assert that high product involvement would bring expertise. As experts on a product, the consumers believe that their decisions are rational and that they have sufficient product knowledge to regulate their consumption behaviour. This can also result in self-regulation failures. To shed further light on this inconclusive issue, this study aims to clarify if consumers with a high level of product involvement are more likely to experience self-regulation failures than those with a low level of product involvement. It also aims to investigate if the effects of product involvement to self-regulation failures are attributable to consumption inertia or because of expertise.

In consumer behaviour literature, the consumption of products may be broadly divided into two categories, utilitarian and hedonic (Childers, Carr, Peck, Carson 2001, Okada 2005, Hartman, Shim, Barber, O'Brien 2006, Scarpi 2006, Kang, Park-Poaps 2010). Utilitarian consumption refers to instrumental or functional products that are for daily necessity or survival. Hedonic consumption, on the other hand, refers to fun or fashionable products that inspire emotional excitement or sensual pleasure (Hirschman, Holbrook 1982, Kempf 1999, Dhar, Wertenbroch 2000, Neeley, Min, Kennett-Hensel 2010, Olsen, Skallerud 2011, Nguyen, DeWitt, Russell-Bennett, 2012; Zhong, Mitchell 2012, Alba, Williams 2013). Overall, utilitarian consumption is less discretionary than hedonic consumption, and the difference between them is in effect a matter of personal perceptions or attitudes that can be very subjective (Okada 2005). The elaboration likelihood model (ELM) of persuasion is a way by which people process information depending on their personal perceptions and abilities. It can depict how attitudes are formed and changed (Petty, Cacioppo, Goldman 1981). Viewed in this light, this study will take on the theory of ELM regarding persuasion to establish the hypothetical relationships between product involvement, self-regulation stimulation (warning labels) and self-regulation failures. The remainder is organized as follows. Relevant literature on self-regulation and product involvement is reviewed and three hypotheses are proposed accordingly. The proposed hypotheses are tested against two experiments on hair dyeing and perm services in laboratory contexts. Based on the findings, some implications are discussed.

## 2. HYPOTHESES

Self-regulation refers to the methods used by people to control and monitor their own behaviour (Baumeister 2002, Quinn, Fromme 2010, Heatherton 2011). Individuals can efficiently maximize their long-term personal interests by focusing on all the available resources and using self-regulation abilities such as ideological preferences, impulse control, and selective preferences (Baumeister 2002). Impulse and self-regulation are usually diametrically opposed. Responding to temptation usually causes people to make mistakes or act against their best interests, and weakens their decision-making abilities (Wertenbroch 1988). Consumers usually resist temptation by exercising their self-regulation abilities (Hoch, Loewenstein 1991, Stacy, Wiers 2010, Quinn, Fromme 2010, Heatherton 2011) that are

backed up and influenced by self-regulation concerns, which in turn respond to outside incentives (Baumeister 2002). Self-regulation dilemmas, namely self-control conflicts, involve the difference between actual and expected situations or conflicts between goals (Fishbach, Shah 2006, Stacy, Wiers 2010, Herman, Polivy 2010). To avoid such dilemmas, people will seek outside strategic assistance that they sometimes make use of to excuse their own self-regulation failures (Vale, Pieters, Zeelenberg 2008). In other words, self-regulation failures can be a consequence of consumers who are influenced by incorrect knowledge and unconsciously lose their self-regulation abilities or ease their grasp on self-regulation dilemmas. Many researchers report that almost everyone has experienced self-regulation failures or conflicts (e.g. O'Guinn, Faber 1989, Folkes, Martin, 1993, Rook, Fisher 1995, Wansink 1996, Wertenbroch 1988, Bernheim, Rangel 2004, Quinn, Fromme 2010, Heatherton 2011) because gaps exist between the expected and real goals (Fishbach, Shah 2006) or conflicts exist amongst the multiple goals pursued simultaneously (Ainslie 1992, Loewenstein 1996, Rachlin 1995, Stacy, Wiers 2010). The most common circumstances, however, are when people are in a bad mood, when minor indulgences snowball into full-blown binges, when people are overwhelmed by immediate temptations or impulses, and when control itself is impaired (e.g. after alcohol consumption) (Heatherton, Wagner 2011).

Vale, Pieters and Zeelenberg (2008) point out that lack of self-awareness and insufficient product knowledge are the two main reasons for self-regulation failures. Hellén and Sääksjärvi (2011) find that happier customers are also more involved in hedonic services, and thus perceive service quality in a more positive manner. Urich and Benkenstein (2012) indicate that favourable perceptions of other customers can exert a strong positive influence on the overall affective responses to hedonic consumption; as such, it may have a positive impact on customers' on-site spending and positive word-of-mouth behaviour. Zhong and Mitchell (2012) find that consumers' subjective well-being influences spending on hedonic products via the mediating effects of their positive interpretation of life circumstances and a broadened set of activities resulting from positive emotions. However, Garg and Lerner (2013) assert that sadness influences the consumption of hedonic unhealthy food, leading individuals to pay more to eat more than they would otherwise, and such undesirable consumption effects of sadness can occur without awareness. All in all, the consumption of a hedonic product should be relevant to the level of product involvement, which can be viewed as perceptions or attitudes that a person has toward the product. Zaichkowsky

(1985) regards product involvement as the subjective meaning that consumers assign to a product, rather than the product itself, based on their personal perceptions and the level at which they value the product. Depending on their level of product involvement, consumers exhibit different behaviour and process different information relevant to the product in purchasing decisions (Chandrashekar 2004, Yoon, Choi 2005, Radder, Huang 2008, Kinley, Josiam, Lockett 2010, Bian, Moutinho 2011, Im, Ha 2011). When a consumer has a high level of product involvement, he/she would highly value a product with a greater ability to process relevant messages and would take the “central route” to diagnose the relevant information (warning labels). If a product message is contradictory to his/her pre-established belief, the consumer would hammer out some negative thoughts, become suspicious, even ignore that message, and would make decisions totally against that message by increasing the amount of consumption, resulting in self-regulation failures. When a consumer has a low level of product involvement, on the contrary, he/she would have less understanding of the product with less ability to process the warning labels and would take the “peripheral route” to diagnose the relevant information. The customer would change his/her attitudes about a product based not only on careful messages but on simple messages that are easy to absorb (Petty, Cacioppo, Goldman 1981, Bian, Moutinho 2011). As such, if a consumer has a low level of product involvement or does not understand the product at all, he/she is particularly cautious about the relevant information (warning labels) and would reduce the consumption, leading to the success of self-regulation. Based on the above theories, this study proposes the first hypothesis.

*H1: Consumers with a high level of product involvement are more likely to experience self-regulation failures than those with a low level of product involvement.*

Many researchers remark that ways of behaviour are not necessarily the result of rational decisions because frequent behaviour leads to consumption inertia (e.g. Aarts Dijksterhuis 2000, Bagozzi 1981, Ouellette, Wood 1998, Ronis, Yates, Kirscht 1989, Xia, Li 2010) and can develop into habits, which in turn force consumers to repeat their consumption behaviour patterns and eventually undermine their abilities to make rational decisions (e.g. Ronis, Yates, Kirscht 1989, Garling, Grvill 1993, LaRose, Lin, Eastin, 2003, Xia, Li 2010). If hair fashion lovers have a high level of product involvement, their purchasing decisions could be affected by their habits, thus, the consumers’ level of consumption would not be affected by the warning labels, resulting in self-regulation failures. In view of this, this study proposes the second hypothesis:

*H1a: The level of influence that product involvement has on self-regulation failures differs significantly by level of consumption inertia. Consumers with a high (low) level of product involvement would develop a high (low) level of consumption inertia and have a high (low) likelihood of self-regulation failures.*

Meanwhile, other researchers argue that consumers with a high level of product involvement would understand the products better (Chandrashekar 2004, Yoon, Choi 2005) and would develop their own expertise toward the products (Alba, Hutchinson 1987, Hong, Sternthal 2010, Latour et al. 2010). In other words, the higher the level of product involvement, the higher the consumers value a product, and the more likely they would devote to evaluating the product features, functions, and usage. Expert consumers believe that they always make rational decisions and that they are cautious and confident enough to evaluate the level of risk while making their own judgments. Even with the presence of warning labels, the effects of self-regulation can be low (Petty, Cacioppo, Goldman 1981, Hong, Sternthal 2010, Garry 2008). Thus if there is a high level of product involvement and high expertise, the effects of self-regulation can be low. For that reason, this study further proposes the third hypothesis:

*H1b: The level of influence that product involvement has on self-regulation failures differs significantly by level of expertise. Consumers with a high (low) level of product involvement would develop a high (low) expertise and have a high (low) likelihood of self-regulation failures.*

To examine the above three hypotheses, we perform two experiments on hair dyeing and perm services in a laboratory context. The participants, the methods, and the results are depicted as follows.

### **3. EXPERIMENT ONE**

#### **3.1. Participants**

In this experiment, my objective was to test *H1* with a 2×2 factorial design: the level of product involvement (high/low) by self-regulation stimulation (present/absent). I performed this experiment at a branch of a renowned chain of fashion hair salons in Taiwan under the guidance of a manager. The participants were customers who had made regular purchases at this shop and whose names had been registered in the customers' database. The manager requested six hairstylists to help perform this

experiment. All the hairstylists were trained, informed about the experimental purpose, and rewarded by this study. Each hairstylist randomly chose 60 volunteer customers, thus a total of 240 voluntary participants were initially identified. To avoid any possible impacts on the store sales and to encourage involvement among salon staff, all participants were informed prior to the experiment that they would receive free post-perm scalp care products if they could complete two phases of this experiment. This study sponsored the free giveaways. Eventually, 120 participants were randomly selected out of the 240 interested participants in this experiment.

### 3.2. Methods

The two phases of this experiment lasted for 90 days.

Phase I tested product involvement and phase II involved the self-regulation manipulation. In phase I, I introduced a 10-item *Involvement Inventory* developed by Zaichkowsky (1985) to measure the product involvement. A sample item went like this: “Hair dyeing and perm services are (1) important, (2) annoying, (3) crucial, (4) exciting for me, (5) of no concern to me.” Responses on a Likert scale ranged from 1 (strongly disagree) to 5 (strongly agree). I summed up the 10-item answers to measure the level of product involvement—a higher (lower) score indicating a higher (lower) level of product involvement. The Cronbach’s alpha was 0.95. The k-mean method was used to classify the 120 participants into two groups based on the product involvement score: 65 fell into the high product involvement group and 55 into the low involvement group.

In phase II, each of the high and low product involvement groups was further broken down into treatment and control subgroups. In the high involvement group, 33 participants were assigned to the treatment subgroup and 32 to the control subgroup. In the low involvement group, 28 were assigned to the treatment subgroup and 27 to the control subgroup.

For the treatment subgroup, self-regulation stimuli (warning messages) were applied as follows. First, the hairstylists presented to the participants an article, which read “hair dyeing and perm products contain carcinogenic substances and may cause scalp problems such as hair loss and baldness.” Then the hairstylists used a professional *Hair and Scalp Scope* 50 times and 200 times, respectively, to check participants’ hair quality and scalp health, including (1) dry, weak, or lustreless hair; (2) hair density and hair loss; (3) scalp build-up and dandruff; and (4) scalp measles or folliculitis. The hairstylists used a Likert scale, ranging from 1 (strongly disagree) to 5

(strongly agree) to record scores for hair quality—higher (lower) scores indicating poorer (better) quality of the hair. The outcomes were presented to the participants to stimulate their self-regulation. After that, I asked two questions to measure their future consumption: “How many hair dying services are you planning to purchase in a year?” and “How many hair perm services are you planning to purchase in a year?” The participants answered these two questions and both answers were summed up (if a customer purchases both hair dying and perm services simultaneously, then the sum is 2) to create a frequency of product perception and consumption.

For the control subgroup, on the other hand, the hairstylists did not provide any self-regulation stimuli (warning messages). All the participants simply answered two questions of future consumption exactly the same as the treatment subgroup without any information about the carcinogenic substances of the hair dying/perm products or the consequences of constant consumption for the scalp.

### 3.3. Results

I employed the one-way analysis of variance (ANOVA) to test the influence of self-regulation in both the high and low product involvement groups. Table 1 shows that there is a significant difference in self-regulation in the low product involvement group ( $F=79.014$ ;  $p=0.00$ ). The mean of self-regulation (3.07) for the treatment subgroup is significantly smaller than that (4.93) for the control subgroup, indicating that self-regulation exerts an influence on consumers (Table 2). No significant difference is observed between the control and treatment subgroups in the high product involvement group ( $F=1.907$ ;  $p=0.172$ ). The mean of self-regulation is 8.09 for the treatment subgroup and 7.81 for the control subgroup (Table 3), indicating that the influence of self-regulation among consumers with a high level of product involvement is not discernible.

Table 1

One-way analysis of variance of self-regulation stimulation on product consumption

Product Involvement	Source of Difference	<i>F</i>	<i>p</i>
Low	Self-regulation stimulation	79.014	0.000**
High	Self-regulation stimulation	1.907	0.172

\*\* $p < .01$

Source: author's own survey



Table 2

Mean, standard deviation, and frequency for product involvement by self-regulation stimulation

Product Involvement	Self-Regulation Stimulation	Mean	Standard Deviation	Frequency
Low	Treatment	3.07	0.716	28
	Control	4.93	0.829	27
	Total	3.98	1.209	55
High	Treatment	8.09	0.723	33
	Control	7.81	0.896	32
	Total	7.95	0.818	65

Source: author's own survey

Table 3

Mean, standard deviation, and frequency for self-regulation stimulation by product involvement

Self-Regulation Stimulation	Product Involvement	Mean	Standard Deviation	Frequency
Treatment	Low	3.07	0.716	28
	High	8.09	0.723	33
	Total	5.79	2.621	61
Control	Low	4.93	0.829	27
	High	7.81	0.896	32
	Total	6.49	1.685	59

Source: author's own survey

Moreover, I used two-way ANOVA to identify the effects of self-regulation failures on the treatment and control subgroups in both the high and low product involvement groups. Table 4 displays the results on how the level of product involvement has affected the self-regulation abilities (main effects of product involvement:  $F=736.045$ ,  $p=0.00$ ; main effects of self-regulation:  $F=29.266$ ,  $p=0.00$ ; combined effects:  $F=53.597$ ,  $p=0.00$ ). It shows that both treatment and control subgroups in the high involvement group are more likely to experience self-regulation failures than their corresponding low involvement counterparts. Hence, the hypothesis (*H1*) is supported.

Table 4

Two-way analysis of variance of product involvement and self-regulation stimulation on product consumption

Source of Difference	<i>F</i>	<i>p</i>
Main effects from product involvement	736.045	0.000**
Main effects from self-regulation stimulation	29.266	0.000**
Combined effects	53.597	0.000**

\*\* $p < .01$

Source: author's own survey

## 4. EXPERIMENT TWO

### 4.1. Participants

The purpose of experiment two was to test if consumption inertia (*H1a*), or if expertise (*H1b*), exerted mediating effects on the level of product involvement and self-regulation failures. However, this experiment tested a completely different group of participants with two separated  $2 \times 2 \times 2$  factorial designs: level of product involvement (high/low) by self-regulation stimulation (present/absent) by consumption inertia (high/low) and level of product involvement (high/low) by self-regulation stimulation (present/absent) by expertise (high/low), respectively.

This experiment was also performed in a laboratory context – a university campus. The voluntary participants were working adults who pursued their continued education at a night-school university in Taipei, and they had been making regular purchases of hair dyeing and/or perm services. Because all the participants had full-time day jobs, their purchasing powers were presumably comparable to the participants in experiment one. Since the factorial design for this experiment contained eight cells and each required a minimum sample size of 30, I recruited 240 participants.

### 4.2. Methods

I also performed experiment two in two phases, separated by an interval of one week. Phase I tested product involvement and phase II tested consumption inertia and expertise. To measure the product involvement, in phase I this experiment used the same 10-item *Involvement Inventory* (Zaichkowsky 1994) as in experiment one. The Cronbach's alpha for the samples was 0.95. The k-mean method was used to classify participants into high and low product involvement groups. Of the 240 participants, however, 12 failed to fill in the form completely and thus were excluded from the following analysis. This left 228 valid observations: 108 made up of the high product involvement group and 120 the low product involvement group.

In phase II, 20 participants were absent, the number of valid participants decreased to 208. Of them, 102 were in the high involvement group and 106 were in the low involvement group. Each of these two involvement groups was further broken down into treatment and control subgroups. In the high involvement group, 49 participants were assigned to the treatment subgroup

and 53 to the control subgroup. In the low involvement group, 52 were assigned to the treatment subgroup and 54 to the control subgroup.

As in experiment one, the hairstylists also provided the treatment subgroup with self-regulation stimuli (warning messages), the carcinogenic substances of hair dying/perm products and the scalp consequences of frequent consumption reported by the article were presented to each participant. All the participants had their hair quality checked by the hairstylists, after that they answered two questions to measure their future consumption. For the control subgroup, however, self-regulation stimuli were not given—the participants only answered the same two questions without any information about the carcinogenic substances of the hedonic fashion products or the scalp consequences of constant consumption.

To measure the consumption inertia and expertise, the participants in each of the four subgroups were further divided into two cells, which were separately managed on the *Inertia Scale* and *Product Knowledge Scale*. This made a total of eight cells and the same process was repeated to measure self-regulation. Finally, I asked the participants in all eight cells to answer the two questions on future consumption. After discarding the incomplete answers, the valid sample size remained at 176 (88 in the treatment subgroup and 88 in the control subgroup) for the final analysis.

To evaluate the level of consumption inertia, I modified the three-item *Inertia Scale* developed by Gremler (1995) as follows: (1) “I am used to hair dying and perm services;” (2) “I know a lot about the processes and products used in hair dying and perm services;” (3) “It is my habit to use hair dying and perm services.” The responses on the Likert scale also ranged from 1 (strongly disagree) to 5 (strongly agree). I summed up the answers from each of the three questions—a higher (lower) score indicating a higher (lower) level of consumption inertia. The Cronbach’s alpha was 0.92. The k-mean method was used to classify the participants into cells based on their level of consumption inertia.

To evaluate the level of expertise, I revised the four-item *Product Knowledge Scale* developed by Smith and Park (1992) as follows: (1) “I understand hair dying and perm services very well;” (2) “If my friends inquire about hair dying and perm services, I am able to offer suggestions of different brands;” (3) “I do not need to conduct extensive research before I can make up my mind to choose any hair dying or hair perm service;” (4) “I am very confident that I can tell an excellent hair dying or perm service from the inferior ones.” The responses on the Likert scale also ranged from 1 (strongly disagree) to 5 (strongly agree). I also summed up the answers

from each of the four questions—a higher (lower) score indicating a higher (lower) level of expertise. The Cronbach's alpha was 0.85. Again, the k-mean method was used to classify participants into cells based on their level of expertise.

### 4.3. Results

I introduced the three-way ANOVA to test the relationships among self-regulation, product involvement, and consumption inertia/expertise. First, in measuring the consumption inertia, Table 5 shows that for the low-involvement-low-inertia cell the mean self-regulation values are 3.10 and 3.43 for treatment and control subgroups, respectively. Similarly, for the low-involvement-high-inertia cell the means are 4.77 and 5.39, for the high-involvement-low-inertia cell the means are 8.17 and 7.35, and for the high-involvement-high-inertia cell the means are 8.48 and 8.89, respectively.

Second, in measuring the expertise, Table 6 shows that for the low-involvement-low-expertise cell the mean self-regulation values are 3.21 and 4.23 for treatment and control subgroups, respectively. Likewise, for the low-involvement-high-expertise cell the means are 3.45 and 4.44, for the high-involvement-low-expertise cell the means are 8.35 and 8.39, and for the high-involvement-high-expertise cell the means are 8.29 and 8.08, respectively.

Table 5

Mean, standard deviation, and frequency for self-regulation stimulation by product involvement and by consumption inertia

Self-Regulation Stimulation	Product Involvement	Consumption Inertia	Mean	Standard Deviation	Frequency
Treatment	Low	Low	3.10	0.651	31
		High	4.77	0.725	13
	High	Low	8.17	0.650	23
		High	8.48	0.680	21
	Total		5.95	2.528	88
Control	Low	Low	3.43	0.662	23
		High	5.39	0.502	18
	High	Low	7.35	0.671	20
		High	8.89	0.320	27
	Total		6.40	2.226	88

Source: author's own survey

Table 6

Mean, standard deviation, and frequency for self-regulation stimulation by product involvement and by expertise

Self-Regulation Stimulation	Product Involvement	Expertise	Mean	Standard Deviation	Frequency
Treatment	Low	Low	3.21	0.802	18
		High	3.45	0.963	22
	High	Low	8.35	0.487	23
		High	8.29	0.845	25
	Total		6.09	2.601	88
Control	Low	Low	4.23	1.152	21
		High	4.44	1.086	24
	High	Low	8.39	0.941	19
		High	8.08	0.881	24
	Total		6.25	2.201	88

Source: author's own survey

Through the consumption inertia, Table 7 further reports that the level of product involvement has significantly affected the self-regulation failures. The high product involvement participants (regardless of treatment or control subgroup) are more likely to experience self-regulation failures than the low product involvement counterparts. This is due to consumption inertia (the combined effects of self-regulation stimulation, product involvement, and consumption inertia,  $F=6.324$ ,  $p=0.013$ ). Thus, the hypothesis (*H1a*) is supported. In other words, consumers with a high (low) level of product involvement would have a high (low) level of consumption inertia, which in turn would be more (less) likely to lead to self-regulation failures.

Table 7

Three-way analysis of variance of product involvement, consumption inertia, and self-regulation stimulation on product consumption

Source of Difference	<i>F</i>	<i>p</i>
Main effects of self-regulation stimulation	2.071	0.152
Main effects of product involvement	1819.745	0.000**
Main effects of consumption inertia	207.315	0.000**
Combined effects of self-regulation stimulation and product involvement	12.994	0.000**
Combined effects of self-regulation stimulation and consumption inertia	15.985	0.000**
Combined effects of product involvement and consumption inertia	22.105	0.000**
Combined effects of self-regulation stimulation, product involvement, and consumption inertia	6.324	0.013*

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

Source: author's own survey

However, expertise seems to be irrelevant in the relationship between product involvement and self-regulation failures (Table 8). The influence of product involvement, either high or low, on self-regulation failures is not significantly different between the high and low expertise scenarios (the combined effects of self-regulation stimulation, product involvement, and expertise,  $F=0.155$ ,  $p=0.694$ ). Thus, hypothesis *H1b* is not supported.

Table 8

Three-way analysis of variance of product involvement, expertise, and self-regulation stimulation on product consumption

Source of Difference	<i>F</i>	<i>p</i>
Main effects of self-regulation stimulation	10.623	0.001**
Main effects of product involvement	986.305	0.000**
Main effects of expertise	0.024	0.877
Combined effects of self-regulation stimulation and product involvement	14.601	0.000**
Combined effects of self-regulation stimulation and expertise	0.226	0.635
Combined effects of product involvement and expertise	2.139	0.145
Combined effects of self-regulation stimulation, product involvement, and expertise	0.155	0.694

\*\* $p < .01$

Source: author's own survey

## 5. DISCUSSION AND IMPLICATIONS

The evidence given by the above two experiments shows that hair fashion lovers with high product involvement are apt to frequently consume the hair dying and perm services. The self-regulation stimuli (warning messages) are ineffective to them. Their modes of behaviour are easily dictated by habits, rather than rational decisions. Consequently, without the guidance of correct knowledge or positive influences, the highly involved consumers often fail to self-control their repetitive hedonic consumption patterns. This finding concurs with Ronis, Yates and Kirscht (1989) and Garling and Garvill (1993).

However, my evidence also shows that the warning labels do work on consumers with low product involvement. These consumers may not understand a specific product or they may not pay attention to its relevant information; hence, their consumption decisions are not dictated by habit. In other words, the low product involvement consumers may change their attitudes toward a product based on simple messages, rather than careful

contemplation of detailed messages. When they read a warning label, they are worried about jeopardizing their health if they do not follow it; as such, they can self-regulate themselves to reduce the hedonic consumption. These findings concur with Petty, Cacioppo and Goldman (1981).

The warning label of any hedonic product can affect sales performance because its main purpose is to discourage consumption of that product by activating the consumers' self-regulation abilities. This study has shown that warning labels of hair dying and perm services are ineffective to those with high product involvement; they are effective only to low involvement consumers. Notwithstanding the ethical issues, the marketers can consider supplementing a product with complimentary offers such as a product combo – a free hair care pack or a free scalp cleaning/recovery pack bundled with the hair dying/perm services to increase the market share of a product, to raise consumption frequency and even to develop consumption inertia within the low involvement subgroup. The marketers can also promote this deal via television commercials or sales promotions to detract consumers' attention from the possible harm incurred by hair dying and perm services, to encourage repetitive purchasing, and to instill consumption inertia. In so doing, the marketers may convert a portion of the low product involvement subgroup into the high product involvement one, increase the sales and market share of the products, and at the same time also increase the sales of complementary products. The regulatory agencies, on the contrary, should always enforce the warning labels on hedonic products so as to inform the consumers of the potential risks and to further advise them to self-regulate their constant or excess use. As for the firms, when manufacturing hedonic products the bottom line should be never to jeopardize the consumers' health over their profitability.

## CONCLUSIONS

This study has contributed to clarifying this inconclusive issue by adding new evidence on how product involvement would affect self-regulation failures and how consumption inertia or expertise would further influence product involvement and self-regulation failures for a hedonic fashion product category – hair dying and perm services. Experiment one has shown that both treatment and control subgroups in the high involvement group are more likely to experience self-regulation failures than their corresponding low involvement counterparts; therefore, *H1* is supported. Experiment two

has supported the hypothesis (*H1a*) that consumers with a high (low) level of product involvement would develop a high (low) level of consumption inertia and have a high (low) likelihood of self-regulation failures. However, experiment two has failed to support the hypothesis (*H1b*) that consumers with a high (low) level of product involvement would develop a high (low) expertise and have a high (low) likelihood of self-regulation failures. To sum up, our two experiments on hair dying and perm services have verified that consumers with high product involvement are more likely to experience self-regulation failures than the low product involvement counterparts; however, high product involvement is mediated by consumption inertia, not by expertise.

This study inevitably has some limitations, which call for future research. First, this study performed only two experiments on one hedonic product category – hair dying and perm services, thus the findings may not be generalized to other hedonic products. Future studies can explore other hedonic products such as cigarettes, liquors, unhealthy foods and drinks, or even web consumption (Hartman, Shim, Barber, O'Brien, 2006) to gain more in-depth insight and to draw more robust conclusions on the same issue. Second, this study focuses on consumers who frequent a physical store. With the advent of e-commerce and online shopping, consumers have easy access to product information and can conduct transactions through the internet. Therefore, another avenue for future study is to explore how this online shopping trend would affect both warning labels and self-regulation, and how it would increase consumer product involvement to further influence consumption decisions. Third, this study does not consider the age or financial status of participants. It is interesting to investigate whether the youngsters who ever excessively consumed a specific hedonic product at the expense of their health or of their credit card debt would change their consumption behaviour when they are older or become wealthier. Fourth, hedonic consumption research has much appeal and has made significant progress toward understanding some of its parameters, yet many questions remain unanswered – for instance, the sources of pleasure, the manner in which consumers seek it, and the ways in which consumers might alter their hedonic consumption decisions to maximize pleasure and happiness (Alba & Williams, 2013). Last but not least, the Likert scale is commonly used in survey research. It is often used to measure respondents' attitudes by asking the extent to which they agree or disagree with a particular question or statement. On the surface, survey data using the Likert scale may seem easy to analyze, but there are some limitations for a data analyst to consider



(Dawes, 2008). Likert scales may be subject to distortion from several causes. Respondents may avoid using extreme response categories, agree with statements as presented, or try to portray themselves or their organization in a more u light. Designing a scale with balanced keying can obviate the problem of acquiescence bias, since acquiescence on positively keyed items will balance acquiescence on negatively keyed items, but central tendency and social desirability are somewhat more problematic. These unanswered questions may also apply to hair dying and perm services, which deserve further exploration.

## REFERENCES

- Aarts, H., Dijksterhuis, A., *The Automatic Activation of Goal-directed Behaviour: The Case of Travel Habit*, "Journal of Environmental Psychology", 20(1), pp. 75-82, 2000.
- Ainslie, G., *Picoeconomics: The Strategic Interaction of Successive Motivational States within the Person (Studies in Rationality and Social Change)*. Cambridge University Press Cambridge, England 1992.
- Alba, J. W., Hutchinson, W. J., *Dimension of Consumer Expertise*, "Journal of Consumer Research", 13(4), pp. 411-454, 1987.
- Alba, J. W., Williams, E. F., *Pleasure Principles: A Review of Research on Hedonic Consumption*, "Journal of Consumer Psychology", 23(1), pp. 2-18, 2013.
- Bagozzi, R. P., *Attitudes, Intention, and Behaviour: A Test of Some Key Hypotheses*, "Journal of Personality and Social Psychology", 41(4), pp. 607-627, 1981.
- Baumeister, R. F., *Yielding to Temptation: Self-control Failure, Impulsive Purchasing, and Consumer Behavior*, "Journal of Consumer Research", 28(4), pp. 670-676, 2002.
- Bernheim, B. D., Rangel, A., *Addiction and Cue-triggered Decision Responses*, "American Economic Review", 94(5), pp. 1558-1590, 2004.
- Bian, X., Moutinho, L., *The Role of Brand Image, Product Involvement, and Knowledge in Explaining Consumer Purchase Behaviour of Counterfeits: Direct and Indirect Effects*, "European Journal of Marketing", 45(1/2), pp. 191-216, 2011.
- Chandrashekar, R., *The Influence of Redundant Comparison Prices and Other Price Presentation Formats on Consumers' Evaluations and Purchase Intentions*, "Journal of Retailing", 80(1), pp. 53-66, 2004.
- Childers, T. L., Carr, C. L., Peck, J., Carson, S., *Hedonic and Utilitarian Motivations for Online Retail Shopping Behavior*, "Journal of Retailing", 77(4), pp. 511-535, 2001.
- Davis, J. J., *Riskier than We Think? The Relationship between Risk Statement Completeness and Perceptions of Direct to Consumer Advertised Prescription Drugs*, "Journal of Health Communication", 5(4), pp. 349-369, 2000.
- Dawes, J., *Do Data Characteristics Change According to the Number of Scale Points Used? An Experiment Using 5-point, 7-point and 10-point Scales*, "International Journal of Market Research", 50 (1), pp. 61-77, 2008.

- Dhar, R., Wertenbroch, K., *Consumer Choice between Hedonic and Utilitarian Goods*, "Journal of Marketing Research", 37(1), pp. 60-71, 2000.
- Fishbach, A., Shah, J. Y., *Self-control in Action: Implicit Dispositions toward Goals and Away from Temptations*, "Journal of Personality and Social Psychology", 90(5), pp. 820-832, 2006.
- Folkes, V. I., Martin, K. G., *When to Say When: Effects of Supply on Usage*, "Journal of Consumer Research", 20(3), pp. 467-477, 1993.
- Garg, N., Lerner, J. S., *Sadness and Consumption*, "Journal of Consumer Psychology", 23(1), pp. 106-113, 2013.
- Garling, T., Garvill, J., *Psychological Explanation of Participation in Everyday Activities* [in:] Garling, T., Gollodge, R. G. (eds), *Behaviour and Environment: Psychological and Geographical Approaches*, pp. 270-297. Elsevier, Amsterdam 1993.
- Garry, T., *Affect and the Role of Corporate Customer Expertise within Legal Services*, "Journal of Services Marketing", 22(4), pp. 292-302, 2008.
- Gómez, B. G., Arranz, A. G., Cillán, J. G., *The Role of Loyalty Programs in Behavioral and Affective Loyalty*, "Journal of Consumer Marketing", 23(7), pp. 387-396, 2006.
- Gremler, D. D., *The Effect of Satisfaction, Switching Costs, and Interpersonal Bonds on Service Loyalty*. Unpublished doctoral dissertation. Arizona State University. Tucson, Arizona 1995.
- Hartman, J. B., Shim, S., Barber, B., O'Brien, M., *Adolescents' Utilitarian and Hedonic Web Consumption Behavior: Hierarchical Influence of Personal Values and Innovativeness*, "Psychology & Marketing", 23(10), pp. 813-839, 2006.
- Heatherton, T. F., Wagner, D. D., *Cognitive Neuroscience of Self-regulation Failure*, "Trends in Cognitive Sciences", 15(3), pp. 132-139, 2011.
- Heatherton, T. F., *Self and Identity: Neuroscience of Self and Self-regulation*, "Annual Review of Psychology", 62(January), pp. 363-390, 2011.
- Hellén, K., Sääksjärvi, M., *Happiness as a Predictor of Service Quality and Commitment for Utilitarian and Hedonic Services*, "Psychology & Marketing", 28(9), pp. 934-957, 2011.
- Herman, C. P., Polivy, J., *The Self-regulation of Eating: Theoretical and Practical Problems* [in:] Vohs, K. D., Baumeister, R. F. (eds.), *Handbook of Self-regulation: Research, Theory, and Applications* (2nd Ed.), pp. 492-508. Guilford Press, 2010.
- Hirschman, E. C., Holbrook, M. B., *Hedonic Consumption: Emerging Concepts, Methods and Propositions*, "Journal of Marketing", 46(3), pp. 92-101, 1982.
- Hoch, S. J., Loewenstein, G. F., *Time-inconsistent Preferences and Consumer Self-Control*, "Journal of Consumer Research", 17(4), 492-507, 1991.
- Hong, J., Sternthal, B., *The Effects of Consumer Prior Knowledge and Processing Strategies on Judgments*, "Journal of Marketing Research", 47(2), pp. 301-311, 2010.
- Im, H., Ha, Y., *The Effect of Perceptual Fluency and Enduring Involvement on Situational Involvement in an Online Apparel Shopping Context*, "Journal of Fashion Marketing and Management", 15(3), pp. 345-362, 2011.
- Kang, J., Park-Poaps, H., *Hedonic and Utilitarian Shopping Motivations of Fashion*, "Journal of Fashion Marketing and Management", 14(2), pp. 312-328, 2010.

- Kempf, D. S., *Attitude Formation from Product Trial: Distinct Roles of Cognition and Affect for Hedonic and Functional Products*, "Psychology & Marketing", 16(1), pp. 35-50, 1999.
- Kempf, D. S., Harmon, S. K., *Examining the Effectiveness of Proposed Cigarette Package Warning Labels with Graphic Images among U.S. College Students*, "Academy of Marketing Studies Journal", 10(2), pp. 77-93, 2006.
- Kim, H. S., *Consumer Profiles of Apparel Product Involvement and Values*, "Journal of Fashion Marketing and Management", 9(2), pp. 207-220, 2005.
- Kinley, T. R., Josiam, B. M., Lockett, F., *Shopping Behavior and the Involvement Construct*, "Journal of Fashion Marketing and Management", 14(4), pp. 562-575, 2010.
- LaRose, R., Lin, C. A., Eastin, M. S., *Unregulated Internet Usage: Addiction, Habit, or Deficient Self-regulation?*, "Media Psychology", 5(3), pp. 225-253, 2003.
- Latour, K. A., Latour, M. S., *Bridging Aficionados' Perceptual and Conceptual Knowledge to Enhance How They Learn from Experience*, "Journal of Consumer Research", 37(4), pp. 688-697, 2010.
- Loewenstein, G. F., *Out of Control: Visceral Influences on Behavior*, "Organizational Behavior and Human Decision Processes", 65(3), pp. 272-292, 1996.
- Neeley, C. R., Min, K. S., Kennett-Hensel, P. A., *Contingent Consumer Decision Making in the Wine Industry: The Role of Hedonic Orientation*, "Journal of Consumer Marketing", 27(4), pp. 324-335, 2010.
- Nguyen, D. T., DeWitt, T., Russell-Bennett, R., *Service Convenience and Social Services Cope: Retail vs Hedonic Setting*, "Journal of Services Marketing", 26(4), pp. 265-277, 2012.
- O'Guinn, T. C., Faber, R. J., *Compulsive Buying: A Phenomenological Exploration*, "Journal of Consumer Research", 16(2), pp. 147-157, 1989.
- Okada, E. M., *Justification Effects on Consumer Choice of Hedonic and Utilitarian Goods*, "Journal of Marketing Research", 42(1), pp. 43-53, 2005.
- Olsen, S. O., Skallerud, K., *Retail Attributes' Differential Effects on Utilitarian versus Hedonic Shopping Value*, "Journal of Consumer Marketing", 28(7), pp. 532-539, 2011.
- Ouellette, J. A., Wood, W., *Habit and Intention in Everyday Life: The Multiple Processes by Which Past Behaviour Predicts Future Behavior*, "Psychological Bulletin", 124(1), pp. 54-74, 1998.
- Park, C. W., Moon, B. J., *The Relationship between Product Involvement and Product Knowledge: Moderating Roles of Product Type and Product Knowledge Type*, "Psychology & Marketing", 20(11), pp. 977-997, 2003.
- Petty, R. E., Cacioppo, J. T., Goldman, R., *Personal Involvement as a Determinant of Argument-based Persuasion*, "Journal of Personality and Social Psychology", 41(5), pp. 847-855, 1981.
- Quinn, P. D., Fromme, K., *Self-regulation as a Protective Factor against Risky Drinking and Sexual Behavior*, "Psychology of Addictive Behaviors", 24(3), pp. 376-385, 2010.
- Rachlin, H., *Self-control: Beyond Commitment*, "Behavioral and Brain Science", 18(1), 109-121, 1995.

- Radder, L., Huang, W., *High-involvement and Low-involvement Products: A Comparison of Brand Awareness among Students at a South African University*, "Journal of Fashion Marketing and Management", 12(2), pp. 232-243, 2008.
- Ronis, D. L., Yates, J. F., Kirscht, J. P., *Attitudes, Decisions, and Habits as Determinants of Repeated Behavior* [in:] Pratkanis, A. R., Breckler, S. J., Greenwald, A. G. (eds), *Attitude Structure and Function*, pp. 213-239. Lawrence Erlbaum Associates, Hillsdale, NJ 1989.
- Rook, D. W., Fisher, R. J., *Normative Influences on Impulse Buying Behavior*, "Journal of Consumer Research", 22(3), pp. 305-313, 1995.
- Scarpi, D., *Fashion Stores between Fun and Usefulness*, "Journal of Fashion Marketing and Management", 10(1), pp. 7-24, 2006.
- Smith, D. C., Park, C. W., *The Effects of Brand Extensions on Market Share and Advertising Efficiency*, "Journal of Marketing Research", 29(3), pp. 296-313, 1992.
- Stacy, A. W., Wiers, R. W., *Implicit Cognition and Addiction: A Tool for Explaining Paradoxical Behavior*, "Annual Review of Clinical Psychology", 6(April), pp. 551-575, 2010.
- Stockley, C. S., *The Effectiveness of Strategies Such as Health Warning Labels to Reduce Alcohol-related Harms: An Australian Perspective*, "International Journal of Drug Policy", 12(2), pp. 153-166, 2001.
- Strahilevitz, M., Myers, J. G., *Donations to Charity as Purchase Incentives: How Well They Work May Depend on What You Are Trying to Sell*, "Journal of Consumer Research", 24(4), pp. 434-446, 1998.
- Taylor-West, P., Fulford, H., Reed, G., Story, V., Saker, J., *Familiarity, Expertise and Involvement: Key Consumer Segmentation Factors*, "Journal of Consumer Marketing", 25(6), pp. 361-368, 2008.
- Torres, I. M., Sierra, J. J., Heiser, R. S., *The Effect of Warning Label Placement in Print Ads*, "Journal of Advertising", 36(2), pp. 49-62, 2007.
- Uhrich, S., Benkenstein, M., *Physical and Social Atmospheric Effects in Hedonic Service Consumption: Customers' Roles at Sporting Events*, "The Service Industries Journal", 32(11), pp. 1741-1757, 2012.
- Vale, R. C. D., Pieters, R., Zeelenberg, M., *Flying under the Radar: Perverse Package Size Effects on Consumption Self-regulation*, "Journal of Consumer Research", 35(3), pp. 380-390, 2008.
- Wansink, B., *Can Package Size Accelerate Usage Volume?*, "Journal of Marketing", 60(3), pp. 1-14, 1996.
- Wertenbroch, K., *Consumption Self-control by Rationing Purchase Quantities of Virtue and Vice*, "Marketing Science", 17(4), pp. 317-337, 1988.
- Xia, T., Li, X., *Consumption Inertia and Asymmetric Price Transmission*, "Journal of Agricultural and Resource Economics", 35(2), pp. 209-227, 2010.
- Yoon, S. J., Choi, Y. G., *Determinants of Successful Sports Advertisements: The Effects of Advertisement Type, Product Type and Sports Model*, "Journal of Brand Management", 12(3), pp. 191-205, 2005.
- Zaichkowsky, J. L., *Measuring the Involvement Construct*, "Journal of Consumer Research", 12(3), pp. 341-352, 1985.

Zhong, J. Y., Mitchell, V. W., *Does Consumer Well-Being Affect Hedonic Consumption?* “Psychology & Marketing”, 29(8), pp. 583-594, 2012.

*Received: July 2013, revised: September 2014*

**Acknowledgements:** *The author wishes to express his sincere thanks to the editor-in-chief and two anonymous reviewers for their insightful comments and constructive suggestions, which contributed to the quality of this paper. Special thanks go to Lawrence W. Lan, Professor Emeritus, National Chiao Tung University, Taiwan, for his endless effort on polishing the technical writing.*