

## Consumer Dissatisfaction Factors and Purchase Behaviors of Backpacks

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### Abstract

*The purposes of the present study were to investigate the factors of consumer dissatisfaction with backpacks and to examine if the levels of dissatisfaction with the factors differ significantly among the groups determined by demographic characteristics and purchase behaviors. The differences in the purchase behaviors of backpacks were also tested among the groups determined by demographic characteristics. Data collection was consisted of two pilot tests and the final test. The questionnaire was distributed to 450 students of universities in Seoul from July 1 to 13 in 2000 and 351 were usable. Data were analyzed by factor analysis, t-test,  $\chi^2$  analysis, MANOVA, ANOVA, Duncan's multiple range tests using SPSS PC\* Program.*

*Five factors were formulated: durability, ease-of-care/color fastness, dimensional stability, wearability and design. Subjects were most dissatisfied with the dimensional stability of backpacks. Different demographic characteristics and purchase behaviors resulted in significantly different levels of dissatisfaction with selected factors. Significant differences were also found in selected selection criteria and purchase behaviors among groups determined by some demographic characteristics.*

*Key words : consumer dissatisfaction, purchase behaviors, backpacks, demographic characteristics, selection criteria.*

### I. Introduction

Post-purchase consumer satisfaction/dissatisfaction (CS/D) is an important determinant to customer retention which is a major goal in marketing. Consumer dissatisfaction is often more specific than satisfaction. When dissatisfactions are not settled, they can cause psychological frustration, brand switching or even expression of dissatisfaction to others. Once a customer is dissatisfied with some products, it is difficult to change his or her attitude toward them<sup>1)</sup>. Moreover, attracting new prospects costs extremely high and is very difficult. Because of

the importance, research on CS/D become increasingly important. Research on CS/D with clothing has been carried out from the eighties. Since then, most research on CS/D in the clothing and textiles field has been carried out mainly focused on clothing, and limited research has been done on accessories.

Backpacks have become an important accessory item for young people today. They wear backpacks almost everyday and use them for personal expression. Because of frequent wear and its importance to many users, it seems necessary to understand dissatisfaction factors with backpacks. Although backpacks look similar

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<sup>1</sup> Hae-Kung Ji, "Research on Consumer Dissatisfaction with Clothing Buying process", (Seoul National University, 1994) 1.

in appearance, various structures, materials and construction methods may cause quality differences and customers dissatisfaction consequently. Moreover, most of the popular brands are foreign ones and their designs may not be appropriate for Korean market. Thus, it is needed to understand the specific dissatisfaction with backpacks, and the levels of the dissatisfaction so that they can be improved for higher consumer satisfaction and provide basic data to backpack industry.

Therefore, the purposes of this research were to investigate the factors of consumers' dissatisfaction with backpacks after purchase, and to examine the differences in the levels of dissatisfaction with backpacks among the groups determined by the demographic characteristics and purchase behaviors. The differences in the purchase behaviors of backpacks were also tested among the groups determined by the demographic characteristics.

## II. Review of Literature

### 1. Consumer Satisfaction and Dissatisfaction

CS/D can be defined as post-consumption evaluation of whether or not the outcome of a chosen alternative at least meets or exceeds the expectation of consumers<sup>2</sup>. Another definition by Howard and Sheth is that 'cognitive state of mind consumers feel whether their sacrifice in the process of purchase is being properly compensated or not<sup>3</sup>'.

Research on CS/D have been carried out from the late sixties, and variables measuring CS/D have been varied. Engel, Kollat and Blackwell

were the frontiers on the consumer satisfaction/dissatisfaction studies since 1968<sup>4</sup>, and Howard, Andreasen, and Day kept expanding the scope of the studies<sup>5</sup>. Early empirical studies mainly focused on identifying the correlation of consumer satisfaction/dissatisfaction and consumer characteristics. In the seventies, many studies were carried out either at the individual level on psychological processes leading to the experience of dissatisfaction and complaining, or the aggregate level on socioeconomic correlates of such experiences.

In the eighties, research emphasized on CS/D by disconfirmation, which is started by Oliver.

Oliver summarized his research on post-purchase satisfaction interaction with belief-expectation, attributes and disconfirmation, and suggested that before a consumer buys a product he/she has an expectation of how this products' outcome would be. After the consumer buys it, he/she is either satisfied or dissatisfied with the product according to whether his/her expectation confirms with the outcome or not. If the actual outcome exceeds the expectation, it is called a positive disconfirmation, and if the outcome comes short of the expectation, it is a negative disconfirmation<sup>6</sup>.

Day defined the postconsumption consumer satisfaction/dissatisfaction, as consumer's response to the evaluation of the perceived discrepancy between prior expectation and actual performance of the product after its consumption. He stated that postpurchase satisfaction interacts with belief-expectations, attitudes and disconfirmation. Disconfirmation is determined whether performance meets, goes beyond, or falls of

<sup>2</sup> James F. Engel, Roger D. Blackwell and Paul W. Miniard, *Consumer Behavior* (New York: The Dryden Press, 1995).

<sup>3</sup> J. A. Howard and J. H. Sheth, *The Theory of Buyer Behavior* (New York: John Wiley & Sons, Inc., 1969).

<sup>4</sup> James F. Engel, David T. Kollat, and Roger D. Blackwell, *Consumer Behavior* (New York: Holt, Rinehart and Winston, 1968).

<sup>5</sup> Ellen M. Moore, and F. Kelly Shuptrine, G. G. "Dissatisfaction Effect on Consumer and Decision Marketing Processes", *Advances in Consumer Research*, 11 (1984): 299.

<sup>6</sup> "Consumer Behavior", *op. cit.*, 274-276.

expectation.<sup>7)</sup>

In the nineties, CS/D research focused on the effect of price, cognitive, and affective CS/D. Voss, Parasurman, and Grewal indicated in their research that performance expectation greatly influenced performance perception and satisfaction only when price and performance are consistent.<sup>8)</sup> Anderson found that price tolerance is negatively associated with the satisfaction.<sup>9)</sup>

## 2. Previous Studies on Consumer Dissatisfaction

Since no research has been carried out on dissatisfaction with backpacks, research on CS/D with clothing and some other products are reviewed here. In the study on 'market extension of Korean textile industrial and fashion industrialization program', Oh found the price, size, design, color, sewing and accessories were the dissatisfying factors for clothing<sup>10)</sup>. Lim found that women were dissatisfied with price, color, design and label attachment, and price is the most dissatisfying factor among them<sup>11)</sup>.

Wall, Dickey and Talarzyk measured consumer dissatisfaction with women's clothing in relation to their lifestyles, demographic charac-

teristics, and experiences and knowledge of textile goods. The results showed that a product itself is the primary factor of CS/D, and consumer characteristics was also an important variable that predicts ones' dissatisfying behaviors<sup>12)</sup>.

Ash stated that demographic variables, especially marital status, occupation, income level and type of residence generally have a high correlation to the dissatisfaction with durability factor for durable product<sup>13)</sup>. Day and Bodur also found that situational factors, such as marital status and types of residence showed higher correlation to dissatisfaction than demographic characteristics, such as education and gender<sup>14)</sup>. Situational characteristics are proven to be more influential than demographic variables. Westbrook and Newman found that consumers with a high personal ability were more likely to be satisfied with their electric appliances than those with a low personal ability<sup>15)</sup>. Day presented that consumers experience and self-participation in consuming process, and critical situations are convincing variables, while Oliver and Bearden<sup>16)</sup>, and Bloch<sup>17)</sup> said that consumers' involvement is the primary variable explaining their satisfaction/dissatisfaction.

<sup>7</sup> Ralph L. Day, "Modeling Choices among Alternative Responses to Dissatisfaction", *Advances in Consumer Research*, 11(1976): 468-469.

<sup>8</sup> Glen B. Voss, A. Parasuraman, and Dhruv Grewal, "The Roles of Prices, Performance, and Expectations in Determining Satisfaction in Service Exchanges", *Journal of Marketing*, 62 (October 1998): 46-61.

<sup>9</sup> R. E. Anderson, "Customer Satisfaction and Price Tolerance", *Marketing Letters*, 7(3) (1996): 256-274.

<sup>10</sup> Sang-rak Oh, "Market Extension of Korea Textile Industrial and Fashion Industrialization Program", *The Korean Business Journal*, 12(3) (1978):4, 54-56.

<sup>11</sup> Sook-ja Lim, "Consumer Judge Problem of Domestic Fashion Industrial - Fashion and Sewing", *Korea Federation of Textile Industrial*, (1983): 84.

<sup>12</sup> M. Wall, L. Dickey, and W. Talarzyk, "Correlates of Satisfaction and with Clothing Performance," *Journal of Consumer Affairs*, 12(1) (1978): 104-115.

<sup>13</sup> S. B. Ash, "A Comprehensive Study of Consumer Satisfaction with Durable Products", *Advances in Consumer Research*, 5 (1978): 254-262.

<sup>14</sup> R. L. Day, & M. Bodur, "A Comprehensive Study of Satisfaction with Consumer Services," *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 4(1977): 64-74.

<sup>15</sup> Robert A Westbrook and Joseph W. Newman, "An Analysis of shopper Dissatisfaction for Major Household Appliances", *Journal of Marketing Research* (Aug. 1978): 456-459.

Swan and Combs measured both expectations about satisfaction with clothing purchase. They found that consumer who were dissatisfied with clothing purchase were more likely to have had their expectations negatively disconfirmed than were consumers who were satisfied with purchases<sup>18</sup>. Wheat and Dickson surveyed female golf players on their satisfaction with team uniforms and the factors influencing satisfaction. Positive relationships between having well-fitting, aesthetically attractive uniforms and uniform satisfaction were found although wearing a recognizable apparel brand name product gave players satisfaction, the actual product produced by these manufacturers did not<sup>19</sup>. Park studied research on buying clothing of adolescent men and using a news source application and dissatisfaction factor of adolescent men and found that white-color consumers tended to be more dissatisfied with the quality, and the most adolescent men are dissatisfied with the variety of products<sup>20</sup>. Park's research on market development of Korea a ready-to-wear industrial' referenced, consumers were most dissatisfied with the standards and quality<sup>21</sup>.

The literature review revealed that there are some discrepancies in results among studies of CS/D. The dissatisfaction factors with the products varied among different product categories. Consumers with different demographic, personal and situational characteristics and consumer

behaviors also tended to be dissatisfied with different factors. The differences indicated that it is needed to study consumersatisfaction/dissatisfaction with various product categories, and investigate how the dissatisfaction differs among consumers with different characteristics. In the present research, backpack was used to find consumer dissatisfaction and its relationships with consumers' demographic and purchase behaviors.

### 3. Backpack Buying Behavior

There has been a limited number of studies on buying behaviors of backpacks as a part of accessories. Lee carried the research on involvement and buying motivation of fashion accessories and found that design, color were the most important selection criteria on appearance, and convenience and lightness were important functional factors<sup>22</sup>. In the research on teenager's backpack, Park found that most teenager buy a backpack because they need one, and the most people buy it at specialty store. Males tend to consider convenience in use and females tend to consider design as the primary factor. Teenagers were generally satisfied with quality, design, and color of backpack, but dissatisfaction with price<sup>23</sup>. In the study on images of bag brands, Park found design, color, vogue, and price were important factors when choosing a bag brand. Consumers tended to buy at a

<sup>16</sup> R. Oliver and W. Bearden. "The Role of Involvement in Satisfaction Processes," *Advances in Consumer Research*, 10 (1978): 250-255.

<sup>17</sup> Peter H. Bloch. "An Exploration into the Scaling of Consumers' Involvement with a Product Class," *Advances in Consumer Research*, 8(1981); 61-65.

<sup>18</sup> John E. Swan, and Linda Combs, "Product Performance and Consumer Dissatisfaction: A New Concept", *Journal of Marketing Research* (Aug. 1978): 461-464.

<sup>19</sup> Kaiya L. Wheat and Marsha A. Dickson, "Uniforms for Collegiate Female Golfers: Cause for Dissatisfaction and Role Conflict?", *Clothing and Textiles Research Journal*, 17(1), (1999):1

<sup>20</sup> Eun-ju Park, Jin-sup Oh, "Purchasing Clothing of Adolescent Male and a News Source Application and Dissatisfaction Factor", *Domestic Science Society Paper*, 27, (1) (1989): 19-17.

<sup>21</sup> Chan-ho Park, "Market Development of Korea a Ready-to-wear Industrial" (Master's thesis, Yeungnam University, 1977): 41.

<sup>22</sup> Ji-sun Lee, "Involvement and Buying Motivation of Fashion Accessories," (Master's thesis, Sungshin Women's University, 1998).

famous brand stores and their buying motivation was the old and worn-out one or fashion change<sup>24</sup>.

### III. Research Methods

#### 1. Research Problems

- 1) What are the dissatisfaction items with backpacks and can they be formulated to simpler set of factors?
- 2) Are there significant differences in the levels of dissatisfaction with the factors according as demographic characteristics?
- 3) Are there significant differences in the levels of dissatisfaction with the factors according as buying behaviors of backpacks?

#### 2. Sampling and Data Collection

Data collection for the present study were consisted of two pilot tests and the final test. The first pilot test was conducted to 80 students to explore the dissatisfaction items for developing a preliminary questionnaire. The second pilot test was carried to 100 students to test the reliability and validity of the preliminary questionnaire. The final questionnaire was distributed to 450 students of universities in Seoul from July 1 to 13 in 2000, and 351 were usable.

The respondents for this study were equally distributed into both sexes with the age range from 18 to 27. Most of them fell between 19 to 25(83.9%) years of age. The grade distribution of the sample was seniors(34%), freshmen(24.1%), sophomores(21.8%) and juniors(19.3%). Students were distributed among four major fields, social sciences and humanities(37.6%), foreign languages and tourism(25.8%), science and engineering(28.8%), and arts and physical education(7.7%).

Regarding the monthly family income, nearly

31.1% fell in the 2,000,000won to 3,000,000won range, followed by the 1,000,000won to 2,000,000won range(30.2%) and 3,000,000won above range(29%).

#### 3. Instruments

A questionnaire representing 4 measures was developed through 2 pilot tests. In the first pilot test, respondents were asked to describe their experiences of dissatisfaction with backpacks and dissatisfaction with afterservices of backpacks, and the preferred brand names. Based on the respondents' comments, a preliminary questionnaire was developed.

Dissatisfaction with Backpacks was assessed by 20 dissatisfaction statements developed from the comments collected in the first pilot test. The statements included dissatisfaction regarding design, wearability, change in shape, sewing, dyeing conditions and difficulties in washing. Five-point rating scale was used, one representing the lowest dissatisfaction level. The reliability of the measure was tested and Cronbach's  $\alpha$  was 0.78. Items with Cronbach's  $\alpha$  over 0.8 were included in the final questionnaire.

Purchase Behaviors were measured by 23 questions about preferred brand name, intention to purchase imitation, reasons of the brand preferences, selection criteria, place of purchase, source of information, average price of recently purchased backpack, frequency of usage, and number of backpacks in possession. A five-point rating scale was used for the 8 questions on the reasons of the brand preferences and 7 questions on selection criteria.

Dissatisfaction with Afterservice included 5 questions about some dissatisfaction with afterservice using a five-point rating scale. They were developed based on the comments collected in the first pilot test. The second pilot test showed

<sup>23</sup> Hyun-chun Park, "A Study on Schoolbag Purchasing Behavior of Young People in Seoul" (Master's thesis, Kwangwoon University, 1994).

<sup>24</sup> Bong-hun Park, "Teenagers Images of Bag Brand on Pusan" (Master's thesis, Dong-A University, 1990).

that students rarely used afterservices when they have problems with backpacks. Thus, the questions on afterservice were not included in the final questionnaire.

Demographic characteristics included 6 questions on gender, age, grade, monthly family income and monthly money allowances.

#### 4. Data Analysis

Data were analyzed by factor analysis, t-test,  $\chi^2$  Analysis, MANOVA, ANOVA, Duncan's multiple range test using SPSS PC<sup>+</sup> program.

### IV. Results

#### 1. Purchasing Behaviors

##### 1) Preferred Backpack Brands and Attributes to the Preference

Student preferred foreign brands far more to the domestic ones. The most preferred were EASTPACK(22.7%), followed by Lucas(12.5%) and JANSORT(8.5%) among foreign brands, and Aizim(6.5%), Ssamzie(5.1%) and Prospect (1.7%) among domestic ones. The main merits of the preferable brands were their price (21.58%), design(21.29%), and then usability (19.98%), fashion(19.88%), color(19.86%) in order. This results correspond with those of Park's study on teenagers backpack purchasing behaviors in that teenagers least cared brand names and considered price as the most when selecting backpack brands.

##### 2) Buying Motivation and Price of the Backpacks

Main buying motivation was the need to have backpacks(35.6%), followed by replacing worn-out ones(34.1%), purchasing when they find one they like(26.5%), and replacing old-fashioned one(3.8%). The result corresponds with the teenagers buying motivation reported by Park<sup>25)</sup>. The average price of recently purchased back-

pack was from 30,000 to 35,000 won.

##### 3) Source of Information and Place of Purchase

The main information source for backpacks were the street(54.5%), friends(29.3%), and advertisements(6.7%), magazines(6.7%) and family members in order. Regarding the place of purchase, almost half of the subjects reported to purchase at speciality stores(48.0%), followed by chain store(19.3%), and wholesale store (13.5%), large discount stores(13.5%), and general store on campus(6.7%).

#### 2. Purchase Behaviors and the Demographic Characteristics

Significant differences were found in the average price of recently purchase backpacks and place of purchase among groups determined by gender, and monthly family income levels (Table 1). Significant difference were found in the buying motivation among groups determined by sex, age, and family income levels. Males with lower income levels spent less than 40,000won for recently purchased backpacks, and females with higher allowances and income levels tended to spend more than 40,000won. Almost 79% of the respondents spent less than 40,000won for purchasing backpacks and only 4.5% purchased one over 60,000won. Female students tended to purchase backpacks in speciality store, chain store, and whole sale store, and male students at general stores on campus and large discount stores. The results of Park's<sup>26)</sup> research was similar to those of present study in that most of students tended to purchase school bags in speciality stores, chain stores.

Students who were 25~27 years old and family income levels of 2,000,000~3,000,000 won were more likely to buy new backpacks because of fashion changes. Students of the lowest income levels tended to purchase new

<sup>25</sup> Hyun-chun Park, *op. cit.*, 53-58.

<sup>26</sup> Hyun-chun Park, *op. cit.*, 60-61.

<Table 1> Purchase Behavior of Groups Determined by Demographic Variable

Source		Gender			Monthly family income(units:won)				Age			
		Male	Female	Row total	Below 2,000,000	2,000,000 above~ 3,000,000 below	3,000,000 above	row total	18~20 year	21~24 year	25~27 year	row total
Average price range	40,000 below	148 (54.0) (42.7)	126 (35.1) (5.8)	274 (100) (79.0)	116 (42.8) (34.0)	83 (30.6) (24.3)	72 (26.6) (21.1)	271 (100) (79.5)	101 (38.1) (30.1)	111 (41.9) (33.1)	53 (20.0) (15.8)	265 (100) (79.1)
	40,000 above ~ 60,000 below	20 (35.1) (5.8)	37 (64.9) (10.7)	57 (100) (16.4)	16 (29.1) (4.7)	20 (36.4) (5.9)	19 (34.5) (5.6)	55 (100) (16.1)	30 (52.6) (9.0)	19 (33.3) (5.7)	8 (14.0) (2.4)	57 (100) (17.0)
	60,000 above	6 (37.5) (1.7)	10 (62.5) (2.9)	16 (100) (4.6)	1 (6.7) (0.3)	4 (26.7) (1.2)	10 (66.7) (2.7)	15 (100) (4.4)	6 (46.2) (1.8)	6 (46.2) (1.8)	1 (7.7) (0.3)	13 (100) (3.9)
	Column total	174 (50.1) (50.1)	173 (49.9) (49.9)	347 (100) (100)	133 (39.0) (39.0)	107 (31.4) (31.4)	101 (29.6) (29.6)	341 (100) (100)	137 (40.9) (40.9)	136 (40.6) (40.6)	62 (18.5) (18.5)	335 (100) (100)
		$\chi^2=7.834^*$ df=2			$\chi^2=15.255^{**}$ df=4				$\chi^2=5.214$ df=4			
Place of purchase	Speciality store	79 (74.3) (22.7)	79 (47.3) (22.7)	158 (100) (48.0)	43 (26.4) (12.6)	59 (36.2) (17.3)	61 (37.4) (17.8)	163 (100) (47.7)	78 (48.4) (23.2)	60 (37.3) (17.9)	23 (14.3) (6.8)	161 (100) (47.9)
	General store on campus	17 (85.0) (4.9)	17 (85.0) (4.9)	34 (100) (5.7)	14 (70.0) (4.1)	4 (20.0) (1.2)	2 (10.0) (0.6)	20 (100) (5.8)	5 (26.3) (1.5)	9 (47.4) (2.7)	5 (26.3) (1.5)	19 (100) (5.7)
	Large discount store	26 (55.3) (7.5)	26 (55.3) (7.5)	52 (100) (13.5)	22 (46.8) (6.4)	19 (40.4) (5.6)	6 (12.8) (1.8)	47 (100) (13.7)	19 (42.2) (5.7)	19 (42.2) (5.7)	7 (15.6) (2.1)	45 (100) (13.4)
	Chain store	32 (47.8) (9.2)	32 (47.8) (9.2)	64 (100) (19.3)	30 (45.5) (8.8)	12 (18.2) (3.5)	24 (36.4) (7.0)	66 (100) (19.3)	22 (33.3) (6.5)	27 (40.9) (8.0)	17 (25.8) (5.1)	66 (100) (19.6)
	Wholesale store	21 (44.7) (6.0)	21 (44.7) (6.0)	42 (100) (13.5)	23 (50.0) (6.4)	15 (32.6) (4.4)	8 (17.4) (2.3)	46 (100) (13.5)	12 (26.7) (3.6)	22 (48.9) (6.5)	11 (24.4) (3.3)	45 (100) (13.4)
	Column total	175 (50.3) (50.3)	175 (50.3) (50.3)	350 (100) (100)	132 (38.6) (38.6)	109 (31.9) (31.9)	101 (29.5) (29.5)	342 (100) (100)	136 (40.5) (40.5)	137 (40.8) (40.8)	63 (18.8) (18.8)	336 (100) (100)
	$\chi^2=11.472^*$ df=4			$\chi^2=35.230^{***}$ df=8				$\chi^2=12.936$ df=8				

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

one to replace the worn-out ones. Students on 21~24 years of age and in the middle income level tended to buy new one when they need one.

**3. Importance Ratings of Selection Criteria**  
ANOVA was used to test if the levels of perceived importance ratings of backpack selection criteria and significant differences were found in the levels of perceived importance of

&lt;Table 1&gt; Continued

Source		Gender			Monthly family income(units:won)				Age			
		Male	Femate	Row total	Below 2,000,000	2,000,000 above ~ 3,000,000 below	3,000,000 above	row total	18~20 year	21~24 year	25~27 year	row total
Information source	Advertisement	16 (69.6) (4.7)	7 (30.4) (2.1)	23 (100) (6.7)	10 (43.5) (3.0)	5 (21.7) (1.5)	8 (34.8) (2.4)	23 (100) (6.8)	7 (30.4) (2.1)	11 (47.8) (3.3)	5 (21.7) (1.5)	23 (100) (7.0)
	Magazine	6 (26.1) (1.8)	17 (73.9) (5.0)	23 (100) (6.7)	9 (40.9) (4.7)	6 (27.3) (1.8)	7 (31.8) (2.1)	22 (100) (6.5)	11 (52.4) (3.3)	8 (38.1) (2.4)	2 (9.5) (0.6)	21 (100) (6.4)
	Friends	56 (56.0) (16.4)	44 (44.0) (12.9)	100 (100) (29.3)	42 (42.9) (12.5)	33 (33.7) (9.8)	23 (23.5) (6.8)	98 (100) (29.1)	36 (37.1) (10.9)	39 (40.2) (11.9)	22 (22.7) (6.7)	97 (100) (29.5)
	Family member	6 (66.7) (1.8)	3 (33.3) (0.9)	9 (100) (2.6)	3 (33.3) (0.9)	2 (22.2) (0.6)	4 (44.4) (1.2)	9 (100) (2.7)	2 (22.2) (0.6)	3 (33.3) (0.9)	4 (44.4) (1.2)	9 (100) (2.7)
	Streets	89 (47.8) (26.1)	97 (52.2) (28.4)	186 (100) (54.5)	68 (36.8) (20.2)	62 (33.5) (18.4)	55 (29.7) (16.3)	185 (100) (54.9)	79 (44.1) (24.0)	73 (40.8) (22.2)	27 (15.1) (8.2)	179 (100) (54.4)
	Column total	173 (50.7) (50.7)	168 (49.3) (100)	341 (100) (100)	132 (39.2) (39.2)	108 (32.0) (32.0)	97 (28.8) (28.8)	337 (100) (100)	135 (41.0) (41.0)	134 (40.7) (40.7)	60 (18.2) (18.2)	329 (100) (100)
		$\chi^2=11.496^*$ df=4			$\chi^2=4.359$ df=8				$\chi^2=9.740$ df=8			
Buying motivation	when they need one	60 (49.2) (17.5)	62 (50.8) (18.1)	122 (100) (35.6)	48 (40.0) (14.2)	28 (23.3) (8.3)	44 (36.7) (13.0)	120 (100) (35.5)	35 (29.7) (10.6)	61 (51.7) (18.4)	22 (18.6) (6.6)	118 (100) (35.6)
	when their old one is worn out	77 (65.8) (22.4)	40 (34.2) (11.7)	117 (100) (34.1)	54 (46.6) (16.0)	44 (37.9) (13.0)	18 (15.5) (5.3)	115 (100) (34.3)	48 (42.5) (14.5)	39 (34.5) (11.8)	26 (32.0) (7.9)	113 (100) (34.1)
	when their old one becomes out of fashion	6 (46.2) (1.7)	7 (53.8) (2.0)	13 (100) (3.8)	4 (30.8) (1.2)	5 (38.5) (1.5)	4 (30.8) (1.2)	13 (100) (3.8)	5 (45.5) (1.5)	2 (18.5) (0.6)	4 (36.4) (1.2)	11 (100) (3.3)
	when they find one they like	30 (33.0) (8.7)	61 (67.0) (17.8)	91 (100) (26.5)	27 (30.3) (8.0)	29 (32.6) (8.6)	33 (37.1) (9.8)	89 (100) (26.3)	46 (51.7) (13.9)	35 (39.3) (10.6)	8 (9.0) (2.4)	89 (100) (26.9)
	column total	173 (50.4) (50.4)	170 (49.6) (100)	343 (100) (100)	133 (39.3) (39.3)	106 (31.4) (31.4)	99 (29.3) (29.3)	338 (100) (100)	134 (40.5) (40.5)	137 (41.4) (41.4)	60 (18.1) (18.1)	331 (100) (100)
		$\chi^2=22.346^{***}$ df=3			$\chi^2=19.331^{***}$ df=6				$\chi^2=19.814^{**}$ df=6			

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001.

price, quality, design, and convenience among groups determined by age (Table 2). No significant difference was found among groups determined by the importance levels of brand name



**<Table 2>** Importance Ratings of Selection Criteria of Groups by Demographic Characteristics

Demographic characteristics		Factors considered	Price	Quality	Design	Convenience in use	Brand name	Color	Fashion trend
Age	18~20 year	3.69(0.92) <sup>a</sup>	4.06(0.85) <sup>a</sup>	4.50(0.74) <sup>a</sup>	3.92(0.97) <sup>a</sup>	3.25(1.11)	4.19(0.92)	3.31(1.05)	
	21~24 year	3.90(0.85) <sup>ab</sup>	4.28(0.79) <sup>ab</sup>	4.31(0.81) <sup>ab</sup>	4.18(0.73) <sup>b</sup>	3.16(0.96)	4.14(0.69)	3.18(1.06)	
	25~27 year	4.03(1.01) <sup>b</sup>	4.47(0.73) <sup>b</sup>	4.17(0.99) <sup>b</sup>	4.33(0.80) <sup>b</sup>	3.09(1.25)	3.96(1.03)	2.98(1.08)	
	F-value	3.440*	6.071**	3.804*	5.763**	0.549	1.554	2.066	
Allowances (units:won)	below 150,000	3.87(0.98)	4.06(0.93)	4.08(1.04) <sup>b</sup>	3.91(1.08) <sup>a</sup>	3.12(1.14)	3.87(1.04) <sup>b</sup>	3.00(1.03)	
	150,000 above~250,000 below	3.90(0.84)	4.36(0.74)	4.44(0.71) <sup>b</sup>	4.28(0.79) <sup>b</sup>	3.21(0.94)	4.25(0.80) <sup>b</sup>	3.19(1.02)	
	250,000 above~350,000 below	3.75(0.88)	4.17(0.74)	4.33(0.83) <sup>ab</sup>	4.03(0.77) <sup>ab</sup>	3.18(1.15)	4.15(0.81) <sup>ab</sup>	3.26(1.05)	
	350,000 above	3.86(1.08)	4.19(0.98)	4.44(0.86) <sup>b</sup>	4.06(0.92) <sup>ab</sup>	3.28(1.16)	4.04(0.90) <sup>ab</sup>	3.30(1.18)	
	F-value	0.58	1.98	2.45*	2.81*	0.20	2.39*	0.878	
Monthly family income (units:won)	1,000,000 below	3.46(0.92) <sup>a</sup>	4.07(0.76)	4.10(0.99) <sup>a</sup>	3.96(0.83)	3.07(0.85)	3.85(0.93)	3.28(0.85)	
	1,000,000 above~2,000,000 below	4.02(0.93) <sup>ab</sup>	4.28(0.81)	4.25(0.90) <sup>ab</sup>	4.10(0.93)	3.07(1.17)	4.02(0.95)	3.02(1.18)	
	2,000,000 above~3,000,000 below	3.86(0.88) <sup>ab</sup>	4.16(0.79)	4.44(0.72) <sup>b</sup>	4.08(0.85)	3.25(1.09)	4.21(0.77)	3.27(1.05)	
	3,000,000 above	3.71(0.89) <sup>b</sup>	4.24(0.86)	4.44(0.79) <sup>b</sup>	4.15(0.81)	3.31(1.00)	4.20(0.83)	3.30(0.99)	
	F-value	3.776*	0.539	2.164*	0.390	1.086	1.984	1.481	

\*p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001.

or fashion trend. The older consumers cared price, quality, and convenience the most ; the younger customers tended to consider design as the most important criteria.

There were significant differences in design, convenience, and color among groups determined by monthly money allowance. People having lower levels of allowances were more likely to rate that convenience, design and color as most important criteria in selecting backpacks. People having the highest levels of monthly allowances tended to consider that

design as the most important criteria.

Significant differences were also found in price and design among groups determined by monthly family income levels. Students of monthly family income between 1,000,000 and 2,000,000 won cared price the most. The higher the people's family income levels were, the higher the importance levels put on design. The results found by Park<sup>27)</sup> and Lee<sup>28)</sup> were consistent with those of the present study in that the most important selection criteria for bags were design, quality and convenience in use.

<sup>27</sup> Hyun-chun Park, *op. cit.*, 49-50.<sup>28</sup> Ji-sun Lee, *op. cit.*, 24-25.

#### 4. Dissatisfaction Factors with Backpacks

The average score for the 25 dissatisfaction statements with backpacks was 3.1 out of 5 indicating that the respondents tended to be dissatisfied with the consumption of backpacks. They were most dissatisfied with the contents of backpack being shaken during heavy movement(3.90).

Factor analysis was employed to classify 25

dissatisfaction statements into a simplified set of factors using principal component and varimax rotation methods. Eigenvalues were used to decide the number of factors were to be retained. Factors with eigenvalues over 1 were kept; five factors were retained, explaining 55% of the total variance (Table 3). Names reflecting the traits comprising the factor were given to each factor. The factors, their names and dominant characteristics were as follows.

<Table 3> Dissatisfaction Factors with Backpacks

Factor	Contents	Factor	Reliability
Durability	· Some parts heavily rubbed are worn out easily	0.72	0.87
	· Zipper is often out of order	0.67	
	· Bottom and lining are ripped easily	0.69	
	· Straps are ripped away easily	0.66	
	· Seam finishes are often frayed out	0.64	
Eigenvalues : 3.39    Percent of variance : 13.92% Cumulative percent of variance : 13.92%			
Ease-of-care/ color fastness	· Washing often causes discoloration	0.78	0.87
	· Washing is difficult	0.76	
	· Color runs because of poor dyeing	0.71	
Eigenvalues : 1.90    Percent of variance : 11.54% Cumulative percent of variance : 25.46%			
Dimensional stability	· Contents are often mixed up	0.79	0.87
	· Contents are shaken up during heavy movements	0.75	
	· Shapes are changed or protruded with heavy load	0.69	
	· Contents are moved to one side to cause shoulder pain	0.52	
Eigenvalues : 1.43    Percent of variance : 11.25% Cumulative percent of variance : 36.47%			
Wearability	· Clothes are often pulled up while wearing backpacks	0.79	0.88
	· Clothes are often wrinkled while wearing backpacks	0.75	
	· Shoulder straps are often flattened after some uses	0.58	
	· Poor fit cause inconvenience	0.55	
Eigenvalues : 1.34    Percent of variance : 10.41% Cumulative percent of variance : 47.15%			
Design	· Backpacks only go with casual wear	0.81	0.87
	· Design and color are too simple	0.70	
Eigenvalues : 1.21    Percent of variance : 7.84% Cumulative percent of variance : 54.99%			

▷ The grading scale range from one to five. One represents the lowest dissatisfaction level and five represents the highest.

Factor 1, Durability(13.92%) is indicative of dissatisfaction with easily worn out parts caused by heavy rubbing, zipper problems, bottom and lining ripped easily, straps ripped away easily, and seam finishes frayed out often. Factor 2, easy-of-care/color fastness(11.54%) indicates dissatisfaction with discoloration after washing, difficulty of washing and color running because of poor dyeing. Factor 3, Dimensional stability (11.52%) represents dissatisfaction with contents mixed up often, contents shaken up during heavy movement, shapes changed or protruded With heavy load, contents moved to one wide to cause shoulder pain. Factor 4, Wearability (10.4%) reflects dissatisfaction with poor fit, flattened shoulder straps, pulled up and wrinkled clothes by backpack. Factor 5, Design(7.84%) represents dissatisfaction with backpack design going only with casual wear, and simple design and color.

Respondents showed that they tended to be most dissatisfaction with dimensional stability factor, and then design, wearability, durability, ease-of-care/color fastness in order.

#### 5. Dissatisfaction Factors and Demographic Characteristics

Multivariate analysis of variance was used to

test the differences in the levels of product dissatisfaction with factors among groups determined by demographic characteristics. Significant differences were found in the main effect of gender and age, and no interaction was found among groups determined by demographic characteristics of gender, and age. ANOVA tables were presented here to show the differences since no interaction was found <Table 4>. There was a significant difference in the dimensional stability and wearability factors between groups determined by gender. Women were more likely to be dissatisfied with dimensional stability and comfort wearability factors than men were.

#### 6. Dissatisfaction Factors and Purchasing Behaviors

MANOVA was used to test the differences in the levels of product dissatisfaction with factors among groups determined by purchase and consumption of backpacks. No significant differences were found in the main effect nor in the interaction between the price for recently purchased backpacks, frequency of use and the number of backpack in possession. Instead ANOVA for each factor revealed that groups determined by the amount of money spent for

<Table 4> Dissatisfaction Levels of Groups Determined by Demographic Characteristics

Dissatisfaction factors		Demographic characteristics				
		Durability	Ease-of-care/ Color fastness	Dimensional stability	Wearability	Design
Gender	Male	2.90(0.81)	2.66(0.84)	3.43(0.73)	2.97(0.79)	3.41(0.85)
	Female	2.91(0.86)	2.73(0.93)	3.60(0.74)	3.22(0.68)	3.28(0.98)
	t-value	-0.02	-0.78	-2.11*	-3.19**	1.30
Age	18 ~ 20 year	2.76(0.80) <sup>a</sup>	2.45(0.88) <sup>a</sup>	3.41(0.66) <sup>a</sup>	3.09(0.78)	3.28(0.96)
	21 ~ 24 year	3.03(0.82) <sup>b</sup>	2.72(0.91) <sup>b</sup>	3.45(0.70) <sup>a</sup>	3.16(0.71)	3.41(0.82)
	25 ~ 27 year	2.96(0.94) <sup>ab</sup>	2.75(0.95) <sup>b</sup>	3.05(0.80) <sup>b</sup>	2.97(0.72)	3.35(1.01)
	F-value	3.49*	3.87*	7.13***	1.49	0.78

\*P<0.05, \*\*P<0.01 >Tested with Duncan's multiple Test groups with a significant difference are marked with different figures.

&lt;Table 5&gt; Dissatisfaction Levels of Groups Determined by Purchasing Behaviors

Dissatisfaction factors		Durability	Ease-of-care/ Color fastness	Dimensional stability	Wearability	Design
Price for recently purchased backpacks	20,000 won over ~ 40,000 won below	2.98(0.78) <sup>a</sup>	2.68(0.89)	3.36(0.68)	3.10(0.72)	3.41(0.88)
	40,000 won over ~ 60,000 won below	2.57(1.04) <sup>a</sup>	2.40(1.05)	3.36(0.87)	3.10(0.87)	3.08(1.07)
	60,000 won over	3.15(0.74) <sup>a</sup>	2.68(0.66)	3.48(0.75)	3.01(0.52)	3.31(0.70)
	F-value	6.26**	2.16	0.19	0.15	3.09
Frequency of use	1 day ~ 3 day	3.06(0.82)	2.83(0.76) <sup>a</sup>	3.44(0.68)	3.21(0.71) <sup>a</sup>	3.35(0.86)
	4 day ~ 6 day	2.84(0.76)	2.64(0.87) <sup>ab</sup>	3.36(0.70)	2.98(0.76) <sup>a</sup>	3.38(0.87)
	7 day	2.93(0.93)	2.51(1.00) <sup>a</sup>	3.33(0.76)	3.19(0.73) <sup>a</sup>	3.32(0.98)
	F-value	1.75	2.66**	0.54	3.59*	0.18
Number of backpack in possession	1 ~ 2 piece	3.00(0.82)	2.69(0.93)	3.35(0.73)	3.01(0.76) <sup>a</sup>	3.33(0.84)
	3 ~ 4 piece	2.84(0.85)	2.62(0.88)	3.37(0.72)	3.22(0.73) <sup>a</sup>	3.34(0.96)
	5 piece over	2.84(0.85)	2.43(0.93)	3.42(0.70)	3.01(0.62) <sup>a</sup>	3.48(1.03)
	F-value	1.46	1.18	0.13	3.49*	0.37

\*p<.05, \*\*p<.01, <sup>a</sup>>Tested with Duncan's multiple Test groups with a significant difference are marked with different figures.

recent purchase of backpacks showed significant differences in the dissatisfaction level with durability factor <Table 5>. Those who purchased the most expensive backpacks and the cheapest backpacks tended to be more dissatisfied with durability of backpacks consumers may expect much durability for the high-priced products and the low-priced products may perform poorly, causing high dissatisfaction in both cases.

Significant differences were also found among the groups determined by the frequency to wear backpacks per week in ease-of-care/color fastness and wearability factors. Regarding ease-of-care/color fastness factor, the frequent wearers of backpacks showed higher dissatisfaction levels. However, the least frequent users(1~3 days wearing) were most dissatisfied with the wearability factor, followed by the everyday users. The students wearing

4~6 days a week showed the lowest dissatisfaction level. This indicates that people wearing backpacks infrequently may experience discomfort since they are not used to that. In contrast, everyday users may be dissatisfied because some possible discomfort could be repeated everyday.

There were significant differences in wearability factor among the groups by the number of backpack in possession. Those who have 3~4 backpacks showed the highest dissatisfaction than the others.

## V. Conclusion and Implication

The purposes of this research were to understand the customers dissatisfaction factors with backpacks, and to test if demographic characteristics and purchasing behaviors make any differences in the level of dissatisfaction. The

results were as follows:

First, the main buying motivation was practical in that they purchase backpacks when they need and want to replace worn-out ones. Street was their main source of information and specialty store was the popular place of purchase. Most students spend about 30,000won for purchase backpacks. Females with higher allowances and income levels tended to spend more than 40,000won. Otherwise males spend below 40,000won. Female students tended to purchase backpacks at specialty store, and chain store, and male students at stores on campus and large discount stores. Differences in selection criteria were found among groups determined by demographic characteristics. Regarding selection criteria, older students were likely to rate that price, quality, and convenience in use as the most important criteria in buying backpack; the younger and those who have relatively higher income levels cared design the most.

Secondly, people were relatively dissatisfied with backpacks. Five dissatisfaction factors were formulated: dimensional stability, ease-of-care/color fastness, wearability, durability, design. Customers were most dissatisfied with the dimensional stability, followed by the design, the wearability, the durability, and the ease-of-care/color fastness factors.

Lastly, differences in the levels of dissatisfaction with factors were only found between groups determined by the price range of recently purchased backpacks, number of backpacks in possession, and frequency of use. Those who purchased the most expensive backpacks were most dissatisfied with durability, and the group bought the cheapest backpacks showed the next highest dissatisfaction level. Frequent wearers of backpacks showed higher dissatisfaction levels. Frequent user were most dissatisfied with the wearability factor, followed by the everyday users. Women were more likely to be dissatisfied with dimensional stability and comfort wearability factors than men.

These results indicates the roon for quality

improvement of backpacks in the market. Consumers are dissatisfied with contents of backpacks being shaken easily when they move heavily. Dividers or inside fixing straps could be installed to reduce this kind of dissatisfaction. Women and the younger care design the most; however, they want to spend about 30,000won for purchasing backpacks. This indicates that, marketers need to develop various designs for backpacks at a reasonable price. Dissatisfaction with clothing wrinkled and pulled up could be prevented by using smoother materials on the back to reduce the traction. Moreover, high dissatisfaction indicate that better materials with higher quality of sewing, better seam finishes and cushioned shoulder straps should be used.

Because the sample of this research was limited to college students in Seoul, the results may not be generalized to the whole population and should not be over interpreted. Further studies could be conducted to investigate dissatisfaction factors with backpacks during pre-purchase and purchase of decision marketing process.

The results of this study may be useful for marketers to improve the quality of backpacks and to develop marketing strategies for better consumer satisfaction.

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