A Study on the Color Image of Baby's Wear Brands

Hae-Joo Choi[†] · Bock-Hee Kim

Dept. of Fashion Design, Hansung University

유아복 브랜드 색채 이미지 연구

최해주[†] · 김복희

한성대학교 패션디자인학과

Abstract

Today the importance of color image is increasing for the brands as well as the products. This study was performed to classify the color image of baby's wear brands and to suggest how the color is effectively planned for the image. In order to classify the color image of 7 baby's wear brands, color palettes of 7 brands were also made by 6 subgroups, each season(summer, fall) by gender(boy, girl, new-born) and based on manufactured garments which were collected by on-line shops. Questionaries were organized with 40 pieces of the color palettes prints for 6 subgroups by 7 brands and 20 baby's wear image adjectives. The total 320 copies were used in the survey to students majored in fashion design. Questionaries were analyzed by factor analysis from SPSS12.0 package program. There are 4 main factors for the color images of baby's wear brands, 'liveliness', 'loveliness', 'chic', 'neatness'. Not hue, but tone is more important to express the characteristics of color images of baby's wear brands. Also white and black are importantly used for baby's wear. The consistency of the brand color image across gender and season is very important to identify and strengthen the color image of brand.

Key word: Baby's wear, Color image, Color palette; 유아복, 색채 이미지, 색채 팔레트

I. Introduction

The present age, which also can be seen as the age of 'excessive choice', has brought intense competition among companies and diversification of products resulting in expansion of customers' choices. Therefore, making the 'emotional value' of the products is more important than the 'functional value' to the customers(Park & Lee, 1998). The creation of characteristic, unique image and planning and delivering the

image are the most important things for appealing powerfully to customers because the basic demand of consumers is already fulfilled and there are many similar products. For this image plan, the color is to be emphasized first. Color is recognized the easiest way when forming the brand image for showing visually and its effect towards consumers is the most immediate.

In these days, the researches on color are being done actively as the interest in color is increasing in the whole fashion industry. While the researches in the past were done mainly on the utilized or preferred color, now the study is being done actively about color image as the effect of color on purchase behavior is being more emphasized. However, the research

about total color image related to brands is insufficient. Even though the importance of color is being emphasized in the creation of brand image and reinforcement of competitiveness in the market, the research on 'brand's color image' has been insufficient. This research is about the utilized colors and the comparison of brand color image in baby's wear brand, which is changing considerably of late. In recent years, baby's wear market has been reformed due to the decline of birth late and the change of consuming structure. Under the competitive circumstance, color image strategy is very important to differentiate the brand image and improve the competitiveness. This research can be estimated as the color image research based on the whole products of brands and suggest a new method of study

II. Baby's Wear and Color Image

1. The Concept of Baby's Wear and the Industry's Present Situation

The target age of the domestic baby's wear industry has been naturally changing according to the current of consumers' demand and the growth of fashion industry which are based on the research on the definition of infants and babies' physicalemotional developmental stage.

Until mid 1990s, the baby · children's wear market was divided into only two parts of baby's wear and

children's wear. This market became more segmented as consumers' demand. The toddler's wear market, while being included in the baby's and children's wear market, formed its own market making. The baby · children's wear market be divided into three groups of baby, toddler, children market. Especially because of the clear proposal of target age in the toddler zone, the baby's wear target lowered to 0~3 years old which used to be 0~5 and the children's wear target fixed to be 5~13(Ku et al., 2001).

Also, in this study the products were departmentalized into only clothing of new born of 0~1year old and baby of 1~3years old. The criterion of departmentalizing between new born's wear and baby's wear refers to the research of Kim(2005).

Under difficult circumstance of gradual reduction of consuming population as Korea having the lowest birth rate of 1.8 in 2005 like <Fig. 1>, the baby's wear industry is going under hard time. The market volume of Korean baby's wear market is getting lower every year like <Fig. 2>. This trend is estimated to be continued in spite of the government's active policy of supporting birth and child care.

The young mother, who have experienced wealthy life and various kinds of fashion when Korea had high growth of economy, tend to show emotion-based consumption. According to the research of Song(2004), the elements of mothers' clothing consumption propensity are divided into trend-oriented, practical, impulsive, aesthetic, and conspicuous propensity. Except for the
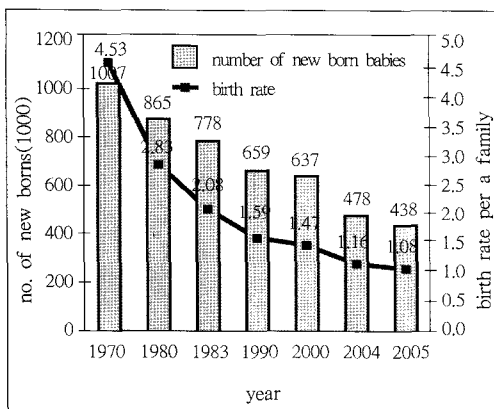

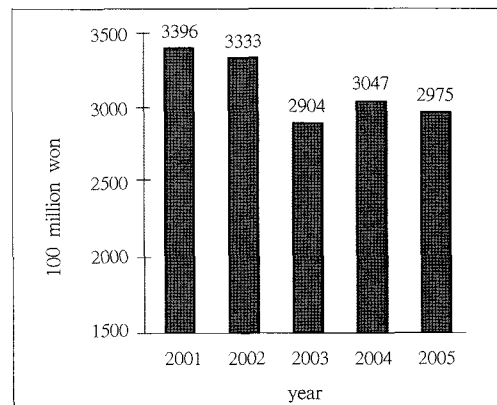**Fig. 1. Birth rate and the number of new born babies (Korea National Statistical Office, 2005).**

Fig. 2. The size of baby's wear industry(Korea Feberation of Textile Industries, 2005).

practical propensity, people with other inclinations tend to think design and color are important. Also, the more the mother's propensity is conspicuous and trend-oriented, the more the mother tends to show similar propensity to consume baby's wear.

Now the baby's wear and layette market are led by the national brands such as 'Agabang', 'Happyland', 'Babyla' and the license brands such as 'Absorba', 'Chocola', 'Elle Poupong', 'Pacorabane baby'. Also, among the brands launched in the early 2000s, 'Minkmiu', 'Baby Heros' have grown rapidly standing on the differentiated and unique concept overwhelming existing brands in sales.

On the other side, reasonably priced brands such as 'Culysu' and 'Alo & Lough' grew rapidly as the price-off stores were activated and the distribution form of internet shopping mall and TV shopping became general. These brands are receiving attention not only because of the price but also the unique characters and style("Downsizing market volume in popular priced market", 2006; "In my grip on mass-volume children' wear", 2006).

As it is shown above, the baby's wear market are changing to be diverse, segmented and specialized at the design and price. And many brands of imported brands, license brands, national brands, price-off store brands are competing altogether like <Fig. 3>.
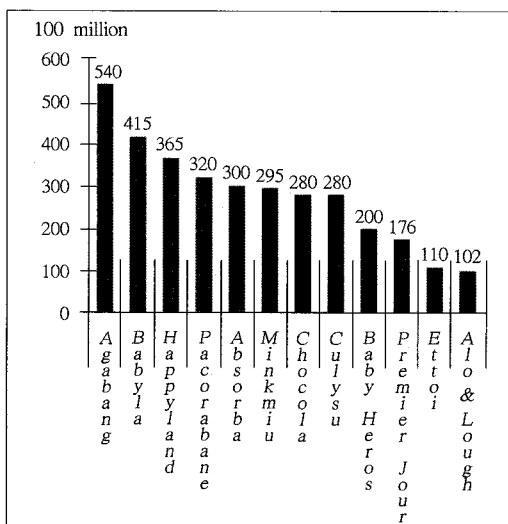
2. Brand Image and Color Plan

Brand image means 'the whole emotional, aesthetic quality that is formed about certain brand' (Park, 2004). Brand image gives the brand a character or a personality. The advantage earned by forming the brand character is letting the consumers have persistent thoughts about the brand under the business environment in which the technical attribute changes easily. If it is hard to tell the quality or the technical attribute, the impact of brand image on the purchase decision gets bigger. Therefore, brand image is the goal of a company and treated and utilized importantly in marketing and design strategy.

Visual image has the biggest impact in the process of establishing brand image and color induces psychological/behavior response easier than any other formative element. Color is an important element in forming the visual brand image which are easily perceived and affects consumers directly. According to the experts of color, the time it takes for a consumer to take a glance at the products on the shelf is less than a second(Yang, 2002). Therefore, companies try to make products that can draws consumers in this short time.

In the brand's color image, the image of the whole products is more important even though the image of each product is also important. Consumers tend to actualize the whole brand image stronger by the arrange of colors. Consequently, in order to operate the brand image efficiently, it is needed to plan colors arrangement considering of the whole products. Also in fashion, color plan is an important task to find the meeting point of image that is pursued by the brand and consumers. It is the preparing process to unite and deliver the image strongly to the consumers. Proper color plan fulfills the profit of consumers and even bigger profit for the company(Lee, 1999).

Being functional and easy to act in is specially more important for the baby's wear than the adult's wear. New born and infants(0~3years old) have soft, sensitive skin so the clothing has to be soft and light(Kim, 2005). So the baby's wear are limited in

Fig. 3. Sales in 2005 of domestic brands(Apparel News Co., 2005; "Downsizing market volume in popular priced market", 2006).

the design and fabrics. Accordingly, it is important to develop unique and different image by color specially in the baby's wear.

III. Research Methods

1. Baby's Wear Brand Selection and the Collecting of Utilized Colors

Baby's wear brand selection was based on the analysis of sales amount and store information of L and H department store in the Fashion Brand Annual and the articles from Fashion Biz from 2004 to 2006. The 6 research objects, 'Minkmiu', 'Baby Heros', 'Chocola', 'Absorba', 'Culysu', 'Pacorabane Baby' which having more than 20 billion won of sales amount were selected and the new brand 'Alo & Lough' which was being paid attention recently was added like <Table 1>. These days, young generation are activating online shopping. Therefore in this research, the data of the baby's wear products was collected through the brands' home pages and the online shopping mall of L department store.

The period of time collecting the product data was five months from May to September in 2006 and the products was restricted to only clothes and two seasons, summer and fall in 2006. Also the collected data about the whole products of each brand was separated and arranged again to newborn, baby boys and baby girls. According to the former research on toddler's wear and the preferred color(Joo, 2000), baby's wear was estimated to have different usage charac-

teristic by gender and season. Also, new born category was added because it was thought to be specialized in soft pastel colors which different from other babies' wears. Therefore, the 6 subgroups of each brand in this research were new born, baby girls, baby boys in summer and fall. Exceptionally, the brand 'Culysu' had ambiguous boundary between the new born's and baby's so new born's wear was excluded, leaving four subgroups. The utilized color of 7 brand which collected on online was analyzed by IRI Color System's Hue & Tone 898 On-line, downloaded by program of Adobe Illustrator 10 On-Line and was analyzed directly online. IRI Color System which is developed by the Ministry of Commerce, Industry and Energy is a color table that consists of 880 chromatic color with 10 hue circle and 11 tone and 19 levels of achromatic color. Considering the brands are for comparison and only for study, the names will be declared with first alphabet instead of the whole brand names in this thesis.

2. Color Palette Development of Baby's Wear and the Image Survey

Based on the Hue & Tone 898 on-line analyzed tool, the color palette of each product was developed. The product collected on online were framed into 3.3cm×5.0cm square color palette that is expressed by simplifying only the used colors like <Fig. 4>. The colors were organized by the component ratio of area and the largest color was laid at the bottom. 21 individual square color palettes of each product were

Table 1. Research target brands

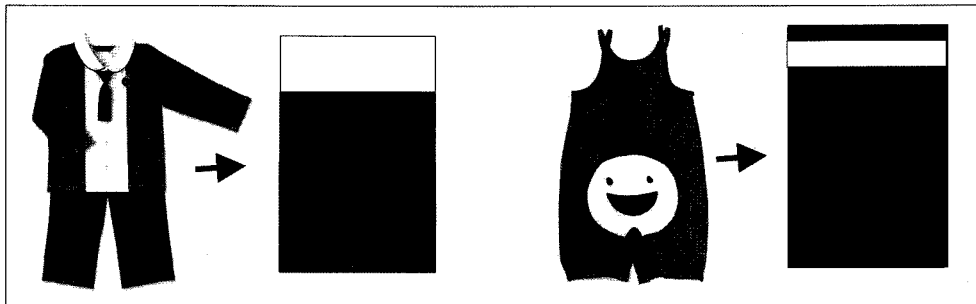| main distribution	Brand	Sales in 2005 (Unit:100 mil)	Form of expansion	Number of distribution channel (unit: stores)			year of launching
				department	specialized	off-price	
department store	Minkmiu	295	DB	39	0	0	2001
	Baby Heros	200	DB	33	20	3	1998
	Chocola	320	LB	49	40	0	1997
	Absorba	310	LB	49	47	0	1984
	Pacorabane baby	280	LB	47	43	0	1994
off-price stored	Culysu	280	DB	0	60	90	2001
	Alo & Lough	102	DB	0	43	34	2004

DB: Domestic Brand, LB: License Brand

Fig. 4. Individual squre color palette.

assigned to A4 and made to the total 40 palettes in A4 according to 6 subgroup per 7 brands, printed colored for the survey without brand names.

To analyze the brand image vocabularies resulting from the color usage of each brand, all the image adjectives that can express the image of baby's wear were extracted from the web sites of each brand, Korean Fashion Brand Annual, domestic fashion trend book and fashion magazine, Fashion Biz from 2005 to 2007. The total number of extracted image adjectives were 193 and frequency in use was 837. On the basis of the frequency in use and the primary survey on fashion studying university students, 20 image adjectives for baby's wear like <Table 2> were selected.

Finally the survey for extracting representative baby's wear color image was done with questionnaire consisting of 40 pieces of color palettes of 7 brands and 20 image adjectives of baby's wear. Each testee was supposed to answer 20 questions with the Likert five point scale by selecting 6 pieces of color palettes randomly among 40 pieces of color palettes. 320 polls were distributed to fashion majored university students and 315 of them were analyzed.

Recollected surveys were done factor analysis by SPSS 12.0 package to extract the representative baby's wear image.

Table 2. 20 selected image adjectives for baby's wear

soft	elegant	cute	sporty	classic
modern	clean	sensible	comfortable	splendid
romantic	refined	active	funny	casual
diverse	lively	simple	pure	courteous

IV. Results and the Analysis

1. The Analysis of Utilized Color in Baby's Wear Brands

The utilized colors were 1928 overall, chromatic colors being 1205(62.5%) and achromatic colors 723(37.5%). Comparing with former studies, achromatic colors were higher. White was 476 being 65% in the achromatic colors and 24.7% of the whole colors which is the highest as individual color In the case of white, the frequency of usage was very high in summer showing 38.2% and also high in fall which was 27.7%, so showing the characteristic color usage in baby's wear. Black showed 10.3% of the whole color, but is also higher than the researches in the past. It was higher in fall being 18.1% comparing with 9.3% in summer. The usage of grey was very low being 2.9% of the whole collected colors. According to Joo's(2000) research on color usage in toddler's wear, the proportion of achromatic colors was 11.5% and black was only 1.7%. This could have happened because the colors were collected in equal weight not considering the frequency of usage as it is suggested in Joo's(2000) study as the limitation or due to the discrepancy in the point of time the two researches were done. This research collected the colors that were used over the whole products and analysis were done including the usage frequency, so showed different result.

From <Fig. 5>, The order of chromatic color usage was red purple(12.2%), red(11.9%), purple blue (9.0%), blue(7.9%), yellow(5.9%). The rate of use of yellow red was low being 3.0% which seems to

result from the fact that the use of beige and brown is very low in baby's wear. Also like the result of Kim's (1981) research, red is frequently used for both girls and boys. Consequently the rate of use of red is higher than that of blue.
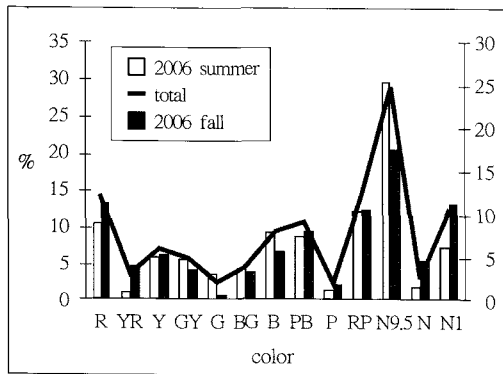
The colors with low rate of usage were in order of purple(1.9%), green(2.0%), yellow red(3.0%), and blue green(3.9%).

There was no obvious difference in tone according to season like <Fig. 6>. Due to the characteristics of baby's wear, pale tone(28.6%) and bright tone(18.5%) were used prominently in spite of the season. Relatively vivid and strong tones were used frequently in summer while light greyish and light tones are used

more in fall. Greyish, dull, deep tones of cloudy and dark tones' usage rate was very low in all seasons.

From the comparison and analysis of hue usage according to gender and season in <Fig. 7–8>, the difference between gender was more obvious than the seasons. Blue and purple blue(sky blue) for boy's wear and red and red purple(pink) for girl's were predominantly used in spite of the season. In particular for the girl's wear, the leaning towards red was more extreme than that of blue in boy's wear. White was prominently used in the case of new born which is the inherent characteristic of the baby's wear.

The research result of utilized tone from <Fig. 9– 10> also showed prominent difference between gen-

N9.5: White, N: Grey, N1: Black

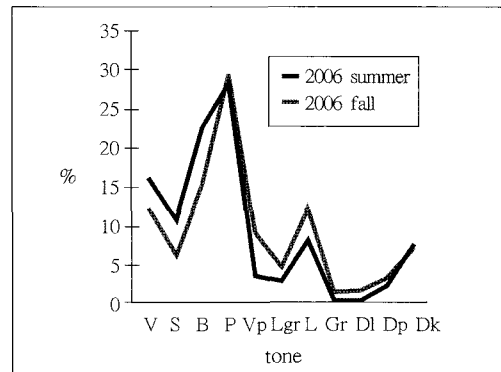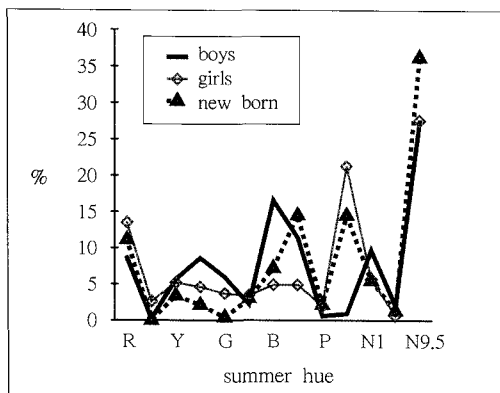**Fig. 5. The utilized color according to the season.**

Fig. 6. The utilized tone according to the season.

N9.5: White, N: Grey, N1: Black

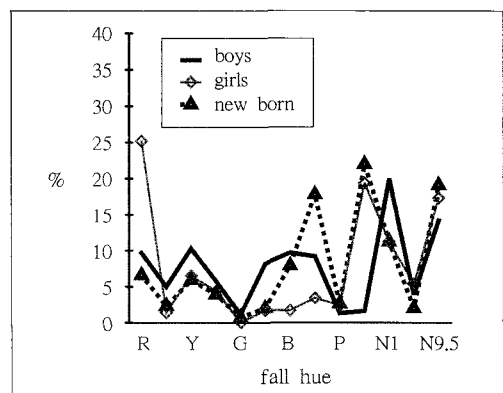**Fig. 7. The utilized hue for summer by gender.**

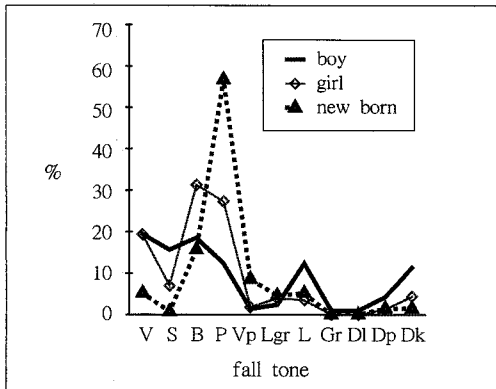**Fig. 8. The utilized hue for fall by gender.**

N9.5: White, N: Grey, N1: Black

Fig. 9. The utilized tone for summer by gender.

Fig. 10. The utilized tone for fall by gender.

der but not the season. In the case of new born's wear, the clear and clean pale tone was the most extreme in spite of the season. Also in girl's wear, almost vivid, bright and pale tone was utilized while the boy's wear used the 11 color tones over all. There was almost no seasonal difference.

2. Analysis of Color Image of Baby's Wear Brand

1) Color Image of Baby's Wear Brand

In order to extract the common elements of diverse adjectives that express the color image of baby's wear, the principal components analysis was used as a statistical method of factor analysis, and after Varimax rotation the factors that have greater than eigenvalue 1 was extracted.

As the result of factor analysis, factors bigger than eigen value 1 are 4, and these 4 factors explain 64.21% of total variance. The rotated component matrix and communality table is as shown in <Table 3>. The communality is the rate that can be explained by the four factors among the variance of 20 observed variables that are included. In the analysis 4 variables of 'classic', 'sensible', 'casual', 'courteous' have the level of 50% and the rest 16 variables are around 65%, which means extraction of four factors was appropriate.

Factor 1 explains 24.13% of total variance and have high correlation with 'sporty', 'splendid', 'funny',

'casual', 'diverse', 'lively', 'active'. These adjectives express the functional comfort and activeness of baby's wear and the Factor 1 can be defined as 'liveliness'. Factor 2 are highly loaded by adjectives that express the cute adorable aspects of baby's wear representing 'loveliness', which are 'soft', 'cute', 'comfortable', 'romantic', 'pure', and accounts for 17.38% of total variance. 5 variables of 'elegant', 'classic', 'modern', 'sensible', 'refined' highly load on Factor 3 that represent the 'chic' of baby's wear. Factor 4 is the image of 'clean' and 'simple' that express the 'neatness'. The variance explained of Factor 3 and 4 is 14.1% and 8.15% respectively. In comparison with Joo's(2000) research on toddler's wear, this research had similar result until the Factor 3, however, Factor 4 which was defined as 'neatness' was a different result which represents the image of baby's wear.

To make the comparison of the color image of baby's wear brand more clear, additional analysis was done as shown in the <Table 4> by dividing the utilized colors of 7 baby's wear brand by gender and season. When the color image of 6 subgroups is compared, the difference between color image by season is relatively small in all 7 brands but there were differences between gender in some brands. 'Brand B', 'brand A' and 'brand C' had more consistency in seasonal, gender color usage compared to other brands. 'Brand B' had 'chic' consistently and 'brand C' and 'brand A' were keep emphasizing 'liveliness' image. 'Brand M' and 'brand S' appeared to be pursuing dif-

Table 3. Factor analysis of color image of baby's wear

		Factor 1	Factor 2	Factor 3	Factor 4	communality
Factor 1 'liveliness'	active	0.811	-0.046	-0.070	0.031	0.666
	funny	0.786	0.095	-0.010	-0.233	0.681
	various	0.757	0.055	0.010	-0.311	0.673
	lively	0.756	0.357	-0.137	-0.174	0.748
	sporty	0.734	-0.232	-0.079	0.192	0.636
	casual	0.702	0.042	-0.038	0.174	0.526
	splendid	0.695	0.076	0.101	-0.454	0.705
Factor 2 'loveliness'	soft	-0.078	0.841	0.051	0.025	0.717
	romantic	0.144	0.814	0.026	-0.236	0.740
	pure	0.031	0.785	-0.028	0.230	0.671
	comfortable	-0.089	0.725	0.143	0.277	0.631
	cute	0.427	0.703	-0.163	-0.178	0.735
Factor 3 'chic'	refined	0.144	0.027	0.757	0.108	0.606
	elegant	-0.218	0.241	0.726	-0.008	0.633
	classic	-0.288	0.035	0.623	0.116	0.489
	modern	0.168	-0.226	0.593	0.432	0.618
	sensible	0.448	0.029	0.584	0.052	0.545
	courteous	-0.431	-0.267	0.514	-0.032	0.522
Factor 4 'neatness'	clean	-0.024	0.416	0.29	0.664	0.699
	simple	-0.328	0.042	0.443	0.548	0.606
eigenvalue		4.825	3.566	2.820	1.630	0.000
% of variance explained		24.126	17.831	14.102	8.150	0.000
cumulated % of variance explained		24.126	41.957	56.059	64.210	0.000

ferent color image for each gender while having consistency in seasonal color image. 'Neatness' for the boys and 'loveliness' for the girls were pursued. In cases of some brands, color image was selected inconsistently for each season and gender. 'Brand P' showed the most inconsistent brand color image in season and gender. For another analysis, the representative images of total baby's wear brands by gender and season were compared with the average factor scores in <Table 5>. In general, girl's wear pursued the color image of 'liveliness' and 'loveliness' while boy's wear pursued 'liveliness', 'chic', 'neatness' apart from 'loveliness'. New born's pursued the image of 'loveliness' and 'neatness'.

In order to find out color image of the 7 baby's wear brands, each brand were analyzed with the 4 factors which are the average of adjectives that have high correlation with each factor as it is shown in <Table 6> and they were compared with the result of the analysis of brand, gender, season in <Table 4>. According to <Table 4> and <Table 6>, 'brand A', 'brand C', 'brand R' could define their color image 'liveliness' and the 'brand B' could define it as 'neatness'. Even though 'brand M' scored high in the image of 'neatness', the score of 'loveliness' was high enough. Also, 'brand S' could be evaluated as 'neat and lovely'. This was caused by pursuing different image for boy's wear and girl's wear. 'Brand P' had the least prominent element of certain image, but relatively frequently brand color image can be defined as 'chic'. When the color image of 7 baby's wear brands were analyzed, 'lively' image are 3, one of them pursued 'neat' image, 'lovely and neat' images are two brands had, and one pursued 'chic' image.

Table 4. Factor analysis in baby's wear brands

brand	group		Factor 1	Factor 2	Factor 3	Factor 4	brand	group		Factor 1	Factor 1	Factor 3	Factor 4
M	summer	boy	3.02	2.45	3.07	3.89	C	summer	boy	4.07	2.39	2.88	2.65
		girl	2.80	3.77	2.56	3.36			girl	3.82	3.70	2.80	2.70
		newborn	2.75	3.50	2.76	3.21			newborn				
	fall	boy	2.89	1.98	3.15	3.28		fall	boy	4.03	1.97	2.59	1.95
		girl	2.94	3.37	2.91	2.89			girl	3.92	3.39	2.85	2.40
		newborn	2.30	3.56	2.86	3.45			newborn				
	subtotal		2.78	3.13	2.88	3.34		subtotal		4.05	2.86	2.77	2.39
B	summer	boy	2.10	1.63	3.07	3.21	P	summer	boy	2.49	2.40	3.52	3.39
		girl	2.29	1.94	3.13	3.23			girl	3.25	2.67	3.05	3.38
		newborn	1.90	2.05	3.59	3.96			newborn	2.96	3.60	2.89	2.66
	fall	boy	1.92	1.71	3.27	3.45		fall	boy	2.95	2.16	2.97	2.65
		girl	2.21	2.44	3.39	3.68			girl	2.92	2.86	2.96	2.40
		newborn	2.18	2.87	3.36	3.85			newborn	2.80	3.69	3.15	3.54
	subtotal		2.10	2.11	3.30	3.57		subtotal		2.90	2.88	3.09	2.99
S	summer	boy	2.68	2.23	3.11	3.49	R	summer	boy	4.03	2.11	2.67	2.57
		girl	2.85	3.18	2.73	3.08			girl	3.52	1.89	2.79	2.24
		newborn	2.79	3.90	2.70	3.20			newborn	3.12	2.96	3.02	3.07
	fall	boy	2.17	2.33	3.33	3.27		fall	boy	2.85	2.13	3.46	2.82
		girl	3.00	4.02	2.82	3.05			girl	2.81	2.13	3.18	2.78
		newborn	2.72	4.19	2.78	3.62			newborn	3.32	3.80	3.00	3.32
	subtotal		2.70	3.28	2.92	3.28		subtotal		3.33	2.50	2.99	2.80
A	summer	boy	3.88	2.28	2.73	2.64							
		girl	4.05	3.23	2.69	2.44							
		newborn	3.62	3.27	2.88	2.68							
	fall	boy	3.48	1.94	3.02	2.29							
		girl	3.81	2.32	2.59	2.25							
		newborn	3.50	2.68	2.98	2.60							
	subtotal		3.72	2.63	2.81	2.48							

shadow are the first and second factor which is 0.1 and less in numerical difference

Table 5. Factor analysis in baby's wear images

group		Factor 1 liveliness	Factor 2 loveliness	Factor 3 chic	Factor 4 neatness
summer	boy	3.10	2.22	3.04	3.18
	girl	3.19	3.02	2.82	2.88
	newborn	2.84	3.23	2.97	3.26
fall	boy	2.92	2.02	3.07	2.80
	girl	3.14	3.03	2.92	2.76
	newborn	2.98	3.33	2.99	3.24
average		3.03	2.80	2.97	3.01

Table 6. Factor average score in brands

brand	Factor 1 liveliness	Factor 2 loveliness	Factor 3 chic	Factor 4 neatness
M	2.78	3.13	2.88	3.34
B	2.10	2.11	3.30	3.57
S	2.70	3.28	2.92	3.28
A	3.72	2.63	2.81	2.48
C	4.05	2.86	2.77	2.39
P	2.90	2.88	3.09	2.99
R	3.33	2.50	2.99	2.80
average	3.03	2.80	2.97	3.01

Table 7. Color distribution of 'active' image (n=850)

	R	YR	Y	GY	G	BG	B	PB	P	RP	N	
V	82	5	17	5	1	10	13	3			bk	113
S	5	5		10	17	3	9				9	
B	9	5	15	6	1	16	10		5	67	8	
P	15		25	5	5	6	10	20		3	7	2
Vp	3	4	13								6	
Lgr	4		4		2			4			5	
L			2	2	1	2	4	3			4	
Gr											3	
Dl				2				10			2	
Dp							4	15			wh	235
Dk								13				

bk: Black, wh: White
shadow is higher than 10 color usage

Table 8. Color distribution of 'neat' image (n=335)

	R	YR	Y	GY	G	BG	B	PB	P	RP	N	
V					9						bk	53
S	2										9	1
B	3				4	14	13			4	8	
P	6		5	8			3	12		1	7	
Vp	2		5		7					3	6	6
Lgr		1	3			1	1	7			5	3
L		2		4		3	4	6			4	
Gr								1			3	
Dl								2			2	
Dp									3		wh	112
Dk		4					1	12		4		

bk: Black, wh: White
shadow is higher than 10 color usage

Table 9. Color distribution of 'lovely' image (n=459)

	R	YR	Y	GY	G	BG	B	PB	P	RP	N	
V	6										bk	16
S	5						1				9	1
B	10		2				2	6		17	8	
P	19	5	6	8			27	31	7	87	7	1
Vp		3	3				3			1	6	4
Lgr			1	2					6		5	
L			1	9	3	2	5	15	3		4	
Gr											3	
Dl										1	2	
Dp								2			wh	114
Dk								9		8		

bk: Black, wh: White
shadow is higher than 10 color usage

Table 10. Color distribution of 'chic' image   (n=168)

	R	YR	Y	GY	G	BG	B	PB	P	RP	N	
V											bk	27
S	5							4	2		9	
B						3	9				8	
P			5	2							7	
Vp		4									6	
Lgr							1				5	
L				21		2	10				4	2
Gr		2					2	3			3	
Dl	4							3			2	2
Dp						1		1			wh	39
Dk		2					10		2			

bk: Black, wh: White
shadow is higher than 10 color usage

2) Color Usage Characteristic according to the Image

The color usage of the objective brands in each season and gender were analyzed to find out the color characteristics of lively, neat, chic and lovely image which were abstracted as representative color images based on the result of this research. From that, the characteristic of color usage was examined. The representative color images through this research were more formed by the tone than the hue. Lively image which was analyzed in brand A, C, and R appears when vivid, strong and bright color tones were being utilized like <Table 7>. Also, neat image from brand B, boy's wear of brand M and S in <Table 8> is formed from bright tone. From <Table 9>, lovely image that was found in the girl's wear and new born's wear in brand M and S is made by the clear, soft pastel color in pale tone. Likewise, 'chic image' from brand P's boy's wear is formed by light greyish, light tones like <Table 10>. The difference of hue usages in the 4 images aren't predominant. According to Song's(2002) study on the utilized colors of domestic women's brands, the formation of color image was more affected by tones than the hue. The agrees with this research reconfirms the importance of tone in color planning.

V. Conclusions and Proposal

The result of the research on color image of baby's wear brands is below.

1. The representative color image which was extracted are 'liveliness', 'loveliness', 'chic', 'neatness'. Girl's wear tend to pursue 'liveliness' and 'lovely' color image, and boy's wear pursued various image of 'liveliness', 'chic', 'neatness' except 'loveliness'. New born pursue 'loveliness' and 'neatness'. When the 7 baby's wear brands were analyzed, predominant image was lively or neat.

2. 4 representative color images in this research examined different and characteristic color usage. They are predominantly formed by tones than hue. 'Liveliness' image is formed by vivid, strong, bright tones, 'neat' image is formed by bright tones. Also, 'loveliness' image is formed by soft pale tone while 'chic' is formed by greyish, light tone.

3. The result of analysis about the utilized color of baby's brand is below. The usage rate of white and black is considerably high. White is used the most frequently being 24.7% of the whole color, and percentage of black was high being 10.3%. The order of chromatic colors used is red purple(12.2%), red (11.7%), purple blue(9.0%), blue(7.9%), yellow(5.9%) while the colors used less are purple(1.9%), green (2.0%), yellow red(3.0%), blue green(3.9%).

4. In the case of baby's wear, the difference among the use of hue and tones for gender was bigger than the difference between seasons. In spite of the season, red purple and red is used much more for the girl's wear and purple blue and blue for the boy's

wear. Black was predominantly used for boy's wear. For the new born, white was used very frequently. The tendency of tones were extreme also. Pale tone was mainly used for the new born, for girl's wear, pale, bright and vivid tone mainly used. Boy's wear uses various tones.

5. For the color image plan for the baby's wear, color consistency in the products by season and gender is necessary. Some of brands among the 7 objective brands, were selecting color image inconsistently. In this case, the examination of color image will be difficult and the consumers will estimate the brand image to the unexpected way.

6. Through this research, it was examined that baby's wear brands have their own color usage characteristics and the four color image that have unique characteristic each. It became obvious that using different strategy is needed to express different image. Also, the range of color and tone usage although baby's wear brand, should be extended over general idea. When the color plan is done strategically and reasonably by total brand products, the effects of brand color image is maximized. This result can be utilized as the basic data when baby's wear brands, which are being segmented and specialized, decide the color image of themselves, and also for the market positioning strategy and marketing strategy of the baby's wear brands.

Reference

Apparel News Co. (2004). *2004/2005 Korea Fashion Brand Annual*. Seoul: Apparel News Co.

Apparel News Co. (2005). *2005/2006 Korea Fashion Brand Annual*. Seoul: Apparel News Co.

Apparel News Co. (2006). *2006/2007 Korea Fashion Brand Annual*. Seoul: Apparel News Co.

Downsizing market volume in popular priced market: Increaing both consumption propensity from the top to the bottom. (2006, May). *Fashion Biz*, p. 212.

In my grip on children' wear in low price market, "Culysu" etc. (2005, November). *Fashion Biz*, pp. 134–136.

In my grip on mass-volume children' wear. (2006, June).

Fashion Biz, pp. 234–236.

Joo, M. Y. (2000). *Color characteristics based on the image of toddler's wear*. Master's thesis, Yonsei University, Seoul.

Kim, B. S. (1981). *Analysis on aesthetic attitude of preschool child*. Master's thesis, Ewha Womans University, Seoul.

Kim, K. H. (2005). *A comparative study on the current state of VMD in the shops of infants'/children's wear according to the changes of distributional environment*. Master's thesis, Chung-ang University, Seoul.

Kim, Y I., Choo, S. H., & Kang, J. H. (2000). A study on the preference of children's clothing and color image. *Journal of the Korean Society of Costume, 50*(1), 25–32.

Kim, Y. I., Koh, A. R., & Hong, H. S. (2000). Fashion image segmaentation of 20's female apparel market and apparel color preference. *Journal of the Korean Society of Clothing and Textiles, 24*(1), 3–14.

Korea Federation of Textile Industries. (2005). The propensity to clothing con-sume, the second half of the year. *KOFOTI*. Retrieved June 25, 2006, from www.kofoti.or.kr

Korea National Statistical Office. (2005). Statistics for the change in population. *Korea National Statistical Office*. Retrieved Semtember 13, 2006, from www.nso.go.kr

Ku, Y. S., Park H. H., & Lee, S. M. (2001). A study on infant's wear brand positioning according to fashion life style of missy woman. *Journal of the Korean Society of Costume, 51*(1), 49–59.

Lee, Y. J. (1999). *Development of color design system based on color image*. Doctoral dissertation, Yonsei University, Seoul.

Park, C. O. (2004). *A study of brand's color*. Master's thesis, Dankook University, Seoul.

Park, H. S. & Lee, D. Y. (1998). A study on the color planning to package design. *Journal of the Society of Design Science, 11*, 78–86.

Song, J. Y. (2002). *Characteristics of color and color combination of domestic lady's wear brand-Focused on 2000 s/s ~ 2002 f/w-*. Master's thesis, Yonsei University, Seoul.

Song, Y. J. (2004). *A study of the influence about behaviors of buying kid's clothes by mother's preference to consume apparel*. Master's thesis, Sookmyung women's University, Seoul.

Yang, W. S. (2002). *A study of sensitivity strategy of color marketing- focus on visual sensitivity*. Master's thesis, Gwangju University, Gwangju.

요   약

오늘날 상품뿐만 아니라 브랜드에 있어서 색채 이미지의 중요성은 증대되고 있다. 이 연구는 유아복 브랜드의 색채 이미지를 분류하고, 이를 통하여 효율적으로 색채 이미지를 계획하는 방법을 제안하고자 하였다. 유아복 브랜드의 색채 이미지를 분류하기 위해 유아복 7개 브랜드를 선정하여 온라인 숍을 통해 상품을 수집하였다. 수집된 상품은 여름, 가을 두 계절 상품으로 이를 다시 남아, 여아, 신생아 3개 군으로 분류하여 브랜드별로 6개의 소그룹으로 분류되었다. 연구 조사 설문지는 각 브랜드의 상품에서 색채만 추출한 컬러 팔레트 40장과 유아복에서 사용되어 추출된 이미지 형용사 어휘 20개로 작성된 설문지로 두 가지로 만들어졌다. 패션디자인 전공 대학생을 대상으로 최종 320장의 설문지가 회수되어 분석되었으며, 통계는 SPSS 12.0 패키지를 이용하여 요인분석(factor analysis)을 실시하였다. 유아복 색채 이미지로 '활발함', '사랑스러움', '멋스러움', '깨끗함'의 네 가지가 추출되었다. 색상이 아니라 색채가 유아복 브랜드의 색채 이미지를 형성하는 데 더욱 중요하였다. 블랙과 화이트가 유아복임에도 많은 비중으로 사용되었다. 성별과 계절별 색채 이미지의 일치성이 유아복 브랜드 색채 이미지를 명확하게 하고 차별화하는데 중요하였다.