Colour Palettes in Healthcare Brand Logos

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ABSTRACT

Colour plays a part in strategic decisions related to brand communication and differentiation; it is central to creating and sustaining corporate image, it can stimulate emotional and cognitive consumer responses and influence persuasiveness. Healthcare logos represent particular companies or brands and can carry forward messages for the respective companies or brands. In this work an overview of the general understanding of colour in brand logos and for the healthcare logos is carried out. Cluster analysis is used to identify the colours that are used in UK healthcare brands. For cold, cough and flu products, in particular, the ten most prevalent colours used were identified and their ability to represent concepts that were identified by consumers as important was explored. Generally, the colours were found to represent the concepts with the orange, dark blue and bluish green colours being particularly effective. Other colours (yellow, blue and red) were less effective and resulted in more varied responses from the participants and the poorest scores were found for black and pink.

1. INTRODUCTION

Logos are designed for a company, product or service to create recognition to make audiences feel safe and trusting of a particular company (River 2003). Especially, corporate brand logos have a great impact and meaning to present their brand identities that become a visual language to communicate with the consumers (Lupton 1996). Marketing research indicates that colour is the largest single factor in a decision of whether or not to make a purchase and consumers recognise specific brands of products by their colours (Bleicher 2012).

Colours in logo designs tell a story and send a message (even convey emotion) that are experienced on many levels: conscious and unconscious, sensory and intellectual often all at the same time (Holtzschue 2006). Colours in healthcare brand logos seek to represent trust and create a positive impression in consumers' minds. For designing healthcare brand logos, it is particularly important to choose the right colours for representing the health-related attributes. Therefore, this paper reviews the general understanding of colour in healthcare brand logos; the purpose of healthcare logos and the most popular colours that are used. It then investigates and analyses the current colour palettes of the UK healthcare brand logos as the next step. In this paper, colour palettes of some examples of UK healthcare brand logos are explored and anaysed. Especially, for cold, cough & flu sector of UK healthcare brand logos, a colour experiment is conducted by using the extracted colours (colour palettes) to investigate how the colours represent colour semiotics of the most considerable factors for buying medications within this sector.

2. COLOUR IN HEALTHCARE BRAND LOGOS

The healthcare industry is vast and encompasses healthcare equipment and services, biotechnology, pharmaceuticals and related life sciences (Lidstone and Maclennan 1999). To design healthcare logos, design elements (such as colours or fonts) are significant factors that must be carefully considered to symbolise the healing of an entity (Hosking and Haggard 1999).

The purpose of healthcare brand logos is to convey the message of its product or service that can be effectively rendered. It has to represent the trust of the concerned people and leave behind a positive impression in their minds. Furthermore, the healthcare brand logo design embodies a particular company or brand that carries forward the message of the respective companies or brands.

Healthcare brand logos are known to incorporate blue, green, red and grey. Blue, green and red carry a note of vitality and freshness; they are very bright colors and have an inspiring feeling into which one can delve. In general, green and blue are the most preferably chosen colours for healthcare logo designs to render a look of cleanliness and wellness (Beckwith 2000). The colours also indicate hospitality to be assured of getting and includes the note of care and concern in almost all healthcare brand logos (Dalke and Matheson 2007). For healthcare logo designs, colors such as white, black, brown or beige are also sometimes used to provide a professional look to a healthcare logo and some more soothing colour can also deliver healing attributes and the message of care.

3. METHOD

In this study, five different healthcare sectors were chosen to collect the logos which were 1) Condom & sexual health (11 brands) 2) Cough, cold & flu (57 brands) 3) Diagnostics & electrical health (42 brands) 4) Incontinence (13 brands) 5) Sleep, stress & energy (42 brands). Logos from each of the sectors were collected and put together to form a single image (collage) representing the sector. Figure 1 illustrates the image that was generated for the 57 brands' logos of the cough, cold and flu sector within the UK market.

Figure 1: Example image for the cough, cold & flu healthcare sector.

Each of the digital images were assumed to be in sRGB format. The sRGB values were converted to CIE XYZ and then CIELAB space. The images were processed using software written in the MATLAB programming environment to perform a cluster analysis in CIELAB space. The MATLAB command *kmeans* was employed which implements the k-means clustering method (MacQueen, 1967); this is a method of cluster analysis which aims to partition n observations into k clusters in which each observation belongs to the cluster with the nearest mean. A total of 11 clusters were extracted from a set of images. In case the most populous cluster was white and this is because of the white background and this cluster was

ignored leaving 10 colour clusters per image. Each cluster was represented by a centroid in CIELAB space and each of the centroids was converted back to sRGB space for display (see in Figure 2).
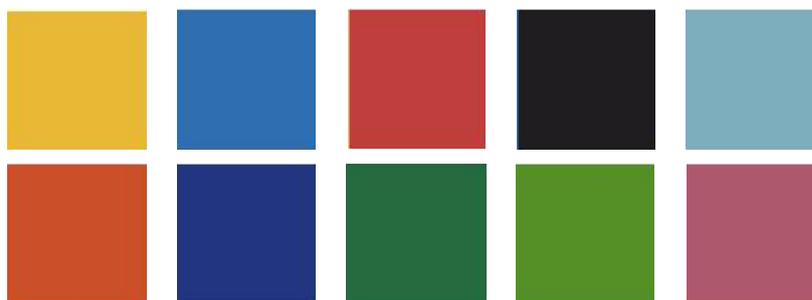
Figure 2: Centroid colours for Cough, Cold and Flu sector.

This experimental study took two-stages; firstly, respondents (15 people) were asked to identify the most important factors when they buy medications for cold, cough & flu; secondly, 10 of these respondents were then further recruited to the colour semiotics experiment. The participants for the experiment were recruited from the School of Design students of Leeds University and they were experienced in colour and design. First of all, the five most considerable factors for buying cold, cough & flu medications were noted as effectiveness, cost, healthy, safety and brand. In the colour experiment part, participants were presented with colours (Figure 2) and asked how much each of these colours represent the five distinct factors; effectiveness, cost, healthy, safety and brand. The questionnaire was designed using a five-point Likert scale (strongly disagree =1 to strongly agree = 5). In the case of "brand" factor, for example, if the colours can be associated with some brands, participants would answer rather strongly agree.

4. RESULTS

In Figure 3, for each of the ten colours the mean scores are given for each of the factors that were identified by consumers as being important. Generally the mean scores for the factors were 3 or more indicating that the participants agreed, at least somewhat, that the colours represented all five factors. However, the strongest association was found for 'safety'. Two colours (pink and black) on average gave weaker associations and three colours (orange, dark blue and blusish green) gave the strongest associations. The factors 'cost' and 'brand association' scored poorly for the yellow colour; however, the 'brand association' factor, in particular, showed high variability in response from the participants (not shown in the Figure). The strongest associations were found for 'healthy' (bluish green) and for 'safety' (light blue and bluish green). For the blue colour, the 'brand association' scored highly followed by 'safety' and 'healthy'. Similarly, 'brand association' was the highest score for the red colour. All five factors gave low scores for the black colour and 'healthy' was the highest level in case of the light blue colour. In the case of the orange colour, 'brand association', 'effectiveness' and 'safety' scored particularly strongly. The factor 'safety' was positioned peak for the dark blue colour and 'healthy', 'effectiveness' and 'cost' factors are followed within the high levels. For the bluish green colour, the 'safety' and 'healthy' occupied the top positions with the reasonable agreement between participants and the 'cost' and 'effectiveness' were also high points ranking being similarly with the dark blue colour. For yellowish green, 'safety' and 'healthy' were graded the highest.

	yellow	blue	red	black	light blue	orange	dark blue	bluish green	yellow green	pink
Effectiveness	3.10	3.00	3.50	2.40	3.00	4.00	3.70	3.50	2.80	2.00
Cost	2.70	3.50	3.30	3.00	2.90	3.40	3.50	3.50	3.20	2.60
Healthy	3.40	3.60	3.10	1.90	4.10	3.50	3.80	4.10	3.70	1.80
Safety	3.50	3.70	3.10	2.30	3.90	3.80	4.00	4.20	3.80	1.90
Brand association	2.40	3.80	3.80	2.40	2.90	4.00	3.40	3.50	3.40	2.00
Pooled Mean	3.02	3.52	3.36	2.40	3.36	3.74	3.68	3.76	3.38	2.06

Figure 3: Mean scores for association of colours with each of the factors.

5. CONCLUSIONS

An analysis of colour for cold, cough and flu products has been carried out. The ten most prevaelnt colours used by UK brands in this sector were identified and their ability to represent concepts that have been identified by consumers as important was explored. Generally, the colours were found to represent the concepts with the orange, dark blue and bluish green colours being particularly effective. Other colours (yellow, blue and red) were less effective and resulted in more varied responses from the participants. Pink and black gave the lowest scores despite black being a very common colour used in the logos of products in this sector. Further work is underway to explore colour combinations which might explain why black is effective.

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