The role of package colour in influencing purchase intent of bottled water
Implications for SMEs and entrepreneurs

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Abstract

Purpose – The purpose of this paper, conducted within an emerging market context, was to investigate the influence of colour in packaging on the purchase intent of consumers for bottled water. Colour, whether in branding or packaging, has always been an important attribute in attracting the attention of consumers. For years, bottled water packaging has largely centred on the colours blue and white. The study looked into the effect of cold colours, warm colours and neutral colours on the purchase intent for bottled water. It also analysed the influence of the demographic variables of age group, gender, language and income group on colour preferences of the product.

Design/methodology/approach – An experimental design was utilised for the purposes of this study. Data were collected by means of a mall intercept survey of South African consumers within suburban supermarket stores.

Findings – The findings determined that while consumers appear somewhat indifferent between colours, there is a greater preference for neutral colours as opposed to cold and warm colours in bottled water packaging. It was also determined that income has a significant influence in colour preference for bottled water, with lower income groups preferring cold and warm colours and higher income groups preferring neutral colours.

Research limitations/implications – This suggests that marketers of bottled water ought to pay close attention to these signals and optimise packaging accordingly. In particular, this study suggests that tailored coloured packaging can be used to target specific income groups in a more appropriate manner. This is particularly pertinent in an emerging market context, where income disparities are extremely prevalent. Small- and medium-sized enterprises (SMEs) and entrepreneurs can seize this opportunity to introduce niche products and stimulate innovation in a relatively stagnant marketplace.

Originality/value – As discovered in the course of this research, few studies have been undertaken to examine the effect of colour in packaging in the context of emerging markets and, notably, sub Saharan Africa. As such, the authors believe this is a significant contribution to the knowledge base. It is hoped that the results of this study will assist marketers, SMEs and entrepreneurs in improving understanding of how colours differentiate a product, particularly in a commodity merchandise category such as bottled water, the knowledge of which may be leveraged to tailor the positioning in the market.

Keywords South Africa, SME, Packaging, Entrepreneur, Colour, Bottled water

Paper type Research paper

1. Introduction

The modern marketing environment has become increasingly saturated with a clutter of competitive products and messages, increasing complexity for consumers and marketers (Deliya, 2012). Bearing this in mind, the selection of colour in packaging can play an important role in attracting consumer attention and purchase consideration (Deliya and Jarmar, 2012; Räisänen, 2014). Previous research has indicated that colour is the most essential visual cue in product packaging, as it tends to be the first aspect thereof noticed by the consumer (Clement, 2007; Danger, 1987). To this end, it has been proposed that colour in product packaging has a significant impact on attracting consumer attention, as it stimulates particular arousal aspects of emotion (Abbott *et al.*, 2009; Bloch, 1995). Packaging serves as the most visible point of attraction to customers at the actual point of purchase (Räisänen, 2014). An important implication is that attractive packaging may maintain attention which would allow for information processing.

It should however be noted that an individual's innate colour preferences alone may not sufficiently explain colour choice for a particular product, as the consumer is likely to have developed a wide range of colour associations over an extended period of learning (Funk and Ndubisi, 2006). Moreover, product types can further influence colour preferences. Product type is, therefore, another influencing factor considered within this study, as evidence suggests that decision making and attitudes differ between high- and low-involvement situations (Grossman and Wisenblit, 1999).

This study opted to focus on the case of a fast-moving consumer good (FMCG), namely, bottled water. Given that FMCGs are low-involvement goods, packaging is likely to have a substantial effect on purchase decisions (Silayoi and Speece, 2004). As a result, this study opted to focus on a product category where the core products remained largely static, across brands, in the eyes of the consumers (Kauppinen-Räisänen and Luomala, 2010). It was recently reported that bottled water is amongst the most universally sold consumer products in the world and is expected to shortly surpass tea as the world's most consumed packaged beverage (Feliciano, 2014). This underscored the mass-market appeal and consumer familiarity of the product.

This research thus seeks to examine how colour influences purchase intentions within the bottled water industry in South Africa, guided by the research question:

RQ1. How does colour in product packaging influence the purchase intention for bottled water in the South African marketplace? Furthermore, how do the key demographic variables of age, gender, culture (incorporating linguistic associations) and income group influence this process?

Consequently, the following research objectives are expressed:

- to determine whether warm versus cold versus neutral colour differences play a role in the purchase intent of bottled water;
- to determine whether gender influences colour preferences for bottled water;
- to determine whether age influences colour preferences for bottled water;
- to determine the differences in colour preferences between cultural groups, using linguistic mother tongue as a proxy;
- to determine whether income influences the purchase intent of bottled water; and

- to determine the opportunities for small- and medium-sized enterprises (SMEs) and entrepreneurs in packaging innovation, as well as new and reinvigorated brand development in the bottled water sector.

The research intends to assist marketers of bottled water in making decisions pertaining to product packaging, advertising and positioning in the market place. Moreover, it should assist SMEs and entrepreneurs to better understand market nuances and the opportunities these present.

The following section will outline the literature examined, considering the extant literature on colour in marketing; the importance of colour in packaging; and the influence of the variables age group, gender, culture (through linguistic mother tongue) and income group. This is followed by an overview of the research methodology used within the study. Thereafter, the results of the statistical analysis and a discussion of these findings are presented. Finally, managerial implications, limitations and areas of future research are offered.

2. Literature review
The following literature review considers the influence of colour in marketing, packaging and the retailing of FMCG merchandise. Finally, an overview of bottled water, the focus of this particular study, is presented.

2.1 The importance of colour in marketing
2.1.1 An overview of colour adoption. Colour, in its most basic form, is light carried on varying wavelengths which is absorbed by the eyes and converted into colour by the brain (Singh, 2006). There are three independent properties of colour: hue, chroma and value (Thompson *et al.*, 1992). Hue refers to the colour itself (blue, green and red), chroma refers to the intensity of the colour and value refers to how light or dark a colour is (Gorn *et al.*, 1997). A colour that is directly observed is therefore a combination of these three properties.

In the field of marketing, colour is used in advertising, branding and product packaging. The use of colour in marketing is thought to assist in the recognition and recall of advertisements resulting in the subsequent recognition and recall of brands and products (Percy and Rossiter, 1983). Colour is interpreted differently by individual consumers and across different cultural groups and thus has many differing meanings and interpretations (Aslam, 2005; Chattopadhyay *et al.*, 2002; Chebat and Morrin, 2007; Grimes and Doole, 1998; Madden *et al.*, 2000; Sable and Ackay, 2010). A knowledge of cultural colour preferences is crucial to marketers, as understanding which colours perform best for specific merchandise categories would allow for the optimimisation of product offerings and the reduction of wasteful advertising (Trent, 1993).

2.1.2 Meanings and interpretations of colour. There exists copious literature examining the meaning of colour to consumers as well as consumer colour preferences (Aslam, 2005; Funk and Ndubisi, 2006; Grossman and Wisenblit, 1999; Kauppinen-Räisänen and Luomala, 2010; Madden *et al.*, 2000; Singh, 2006). Colour meanings and interpretations also differ widely across cultures (Aslam, 2005; Chattopadhyay *et al.*, 2002; Chebat and Morrin, 2007; Grimes and Doole, 1998; Madden *et al.*, 2000; Sable and Ackay, 2010). These differing interpretations are rooted in the fact

that different cultures are exposed to different colour associations and thus develop colour preferences on the basis of their cultural colour associations (Silayoi and Speece, 2004). Table I reflects a summary of colour meanings and preferences across different nations.

With the broad meanings of colour across geographic territories, it is theorised that colour preferences amongst individuals are learned (Adams and Osgood, 1973; Aslam, 2005; Grossman and Wisenblit, 1999). Grossman and Wisenblit (1999) argue that consumer responses to colour are a product of associative learning. This type of learning occurs when individuals make connections between events that take place in an environment (Funk and Ndubisi, 2006; Grossman and Wisenblit, 1999). Therefore, a consumer's colour preference can be thought of as a consistent learned response to colour stimuli. However, Kauppinen-Räisänen and Luomala (2010) argue that colour preferences are affected by the specific product type and that consumers prefer certain colours for certain product types. This has been found to be particularly significant for food products (Garber et al., 2000; Kauppinen-Räisänen and Luomala, 2010; Koch and Koch, 2003).

Colour	Meanings	Sources
Blue	Calm, trustworthy, high quality, expensive, cleanliness and masculine (Sweden, USA); feminine (Holland); death (Iran); and purity (India)	Aslam (2005), Grimes and Doole, (1998), Grossman and Wisenblit (1999), Jacobs et al. (1991), Sable and Ackay (2010), Schiffman et al. (2001)
Green	Natural, pure, fresh, inexpensive, good-tasting, danger and disease (Malaysia); love and happiness (Japan); envy (Belgium and USA); and trustworthy (China)	Aslam (2005), Grimes and Doole, (1998), Hupka et al. (1997), Jacobs et al. (1991), Sable and Ackay (2010)
Red	Love, warmth, passion, aggression, expensive, high quality and good-tasting (China); unlucky (Nigeria and Germany); lucky (China, Denmark and Argentina); and ambition and desire (India)	Aslam (2005), Grimes and Doole, (1998), Grossman and Wisenblit (1999), Jacobs et al. (1991), Sable and Ackay (2010)
Yellow	High Quality, expensive, happiness, playful, luxury, sophistication, warmth and infidelity (France); envy and jealousy (Germany and Russia); and royalty and authority (China)	Aslam (2005), Hupka et al. (1997), Jacobs et al. (1991), Sable and Ackay (2010)
Purple	Premium, high quality, expensive, luxurious, sophisticated, power, dignity, anger and envy (Mexico); sin and fear (Japan); and love (China, South Korea and USA)	Aslam (2005), Grimes and Doole, (1998), Hupka et al. (1997), Jacobs et al. (1991), Sable and Ackay (2010)
Black	Expensive, high quality, hi-tech, old, heavy, serious, power, sadness, fear, dullness and stupidity (India); death and grief (USA); trustworthy (China); and envy and jealousy (Mexico and Russia)	Aslam (2005), Grossman and Wisenblit (1999), Hupka et al. (1997), Jacobs et al. (1991), Sable and Ackay (2010)
White	Hapiness, purity, death and mourning (Japan)	Aslam (2005), Grimes and Doole, (1998)

Table I.
Summary of colour meanings and preferences across multiple nations

Much research concerning product specific colour preferences appears to often divide colour into three distinct categories, namely, warm, cool and neutral colours (Chebat and Morrin, 2007; Grossman and Wisenblit, 1999; Kauppinen-Räisänen and Luomala, 2010). Yellow and red are often thought to be warm colours, green and blue are deemed to be cool and black, grey and white are considered neutral colours (Grossman and Wisenblit, 1999). Warm colours are often big attention grabbers (Kauppinen-Räisänen and Luomala, 2010) while cool colours are often more calming (Grossman and Wisenblit, 1999). In the application of colour, it becomes crucial to select the optimal colour to attract attention and communicate with consumers in the desired manner.

2.1.3 Colour as a key communication tool. Colour provides its observer with visual information (Singh, 2006) and is thus an important component of non-verbal communication (Bellizzi *et al.*, 1983). This information can then be used for the purposes of assessment, evaluation and decision making. Colour decisions are typically based on intuition and anecdotal evidence (Gorn *et al.*, 1997). Colour, when applied in a marketing context, acts as a visual cue to consumers and can play an important role in consumer's purchase decision making (Grossman and Wisenblit, 1999). Colouring can be used to relay a brand's positioning, a product's benefits or to significantly differentiate a brand or product from its competitors (Chattopadhyay *et al.*, 2002). In addition to acting as a brand identifier, colour can also be used as a cue for price or quality (Funk and Ndubisi, 2006; Garber *et al.*, 2000; Singh, 2006). In advertising, the use of certain colours seeks to direct attention to the most important parts of an advertisement, thereby increasing the likelihood of the main advertisement message being relayed (Funk and Ndubisi, 2006).

Colour is often the first aspect noticed by consumers and is therefore vital to grabbing their attention (Kauppinen-Räisänen and Luomala, 2010). In this regard, colour often plays a critical role in product packaging, as it is visible from afar, is memorable and plays a role in brand recognition (Garber *et al.*, 2000). Due to the nature of varying colour meaning and perceptions, it becomes necessary to match colour in packaging to the brand message (Kauppinen-Räisänen and Luomala, 2010). The use of colour in product packaging is an important element in this study and is considered next.

2.2 The importance of colour in product packaging
2.2.1 An overview of product packaging. Product packaging refers to the container of the product. It includes the design, colour, shape, labelling and materials which encompass the physical appearance of the product (Deliya, 2012). The package colour of a product can have a significant impact on the consumer's ability to recognise novelty and contrast amongst other product brands (Garber *et al.*, 2000), recognise specific product brands (Garber *et al.*, 2000), infer product quality (Funk and Ndubisi, 2006) and formulate pre-conceived expectations about the product (Garber *et al.*, 2000). The use of colour as a attribute cue on product packaging can create a strong association, particularly when the colouring is unique to a certain brand (Silayoi and Speece, 2004).

Given that 85 per cent of shoppers purchase a product without evaluating a different one, and that a further 90 per cent of consumers make a purchasing decision after only examining the front of the packaging, a visual cue, without physically picking up the product (Clement, 2007; Kauppinen-Räisänen, 2014), more

often than not, purchases in store are made primarily based on a product's outward appearance. Research conducted by Silayoi and Speece (2004) found that participants identified packaging elements as the main factors guiding their assessment of and resultant purchase decisions of houshold purchases. They further identified that colour was one of the packaging elements cited most often by participants (Silayoi and Speece, 2004). Colour is fundamental to the appearance of packaging; thus, its role therein is explored below.

2.2.2 Package colours in attracting consumer attention. Previous research in product packaging indicates that shape (Bloch, 1995; Schoormans and Robben, 1997), pictures (Underwood *et al.*, 2001) and colour (Grimes and Doole, 1998; Belizzi and Hite, 1992) are effective in attracting consumers' attention. The role of that packaging plays in influencing consumer purchase behaviour became apparent in the 1950s when self-service retailing gained popularity (Kauppinen-Räisänen, 2014). This gain in popularity required that packaging assume not only a functional role but also a promotional role in swaying purchase decisions (Kauppinen-Räisänen, 2014). The use of colour as a method to attract attention has been highlighted as the most essential visual cue, as it tends to be the first physical element noticed by consumers (Danger, 1987; Kauppinen-Räisänen, 2014).

In some cases, it has been shown that colour in packaging has the ability to maintain the attention of consumers (Aslam, 2005; Schoormans and Robben, 1997), this being especially prevalent when consumers seek variety in brand choices (Garber *et al.*, 2000; Schoormans and Robben, 1997). Furthermore, research reveals that design elements which include packaging appearance, such as colour, stimulate arousal aspects of emotion, for example attractiveness (Abbott *et al.*, 2009; Bloch, 1995). An important implication of this is that attractive packaging may maintain attention which enables further information processing (Stoll *et al.*, 2008). The link between colour preferences and product type is addressed below.

2.2.3 Package colours according to product type. There is evidence to suggest that the impact of colour in packaging largely depends on the product type (Kauppinen-Räisänen, 2014; Kauppinen-Räisänen and Luomala, 2010; Jacobs *et al.*, 1991). In coffee packaging, for example, yellow could be used to attract attention due to its dissimilarity amongst coffee brands, but may be used for brand search in another product category (Garber *et al.*, 2000). Likewise, there is evidence to suggest that a high level of deviation from what is considered an orthodox colour for a product type may attract attention (Schoormans and Robben, 1997). This may even be preferred by consumers-seeking novelty and exclusivity (Kauppinen-Räisänen, 2014; Kauppinen-Räisänen and Luomala, 2010). However, in most instances, packaging in similar colours will attract consumer attention as part of product class identification, as well as serving to set expectations regarding product performance and/or quality (Kauppinen-Räisänen and Luomala, 2010).

Garber *et al.* (2000) conducted research on the role of package colour on consumer purchase consideration and choice, finding that when shoppers are not loyal to a particular brand, a change in package colour could lead to an enhancement in brand consideration. However, in small and relatively stable categories such as raisins, flour and spaghetti, the revised packaging was more likely to be picked up and purchased if the colours were similar to the brand's original packaging, indicating that consumers used colour in this category as a cue for product quality. The study's authors also found

that a change in product colour can increase the length of search for a specific product category (Garber *et al.*, 2000).

2.3 Personal factors influencing consumers' perception of colour
2.3.1 An overview of variables influencing colour perceptions. As highlighted in Section 2.1.1 above, addressing the development of colour associations, associative learning could explain how certain colours have come to hold relevant meanings for people of different cultures, genders and even age brackets (Kauppinen-Räisänen, 2014). These factors are addressed below.

2.3.2 Culture and its influence on colour perceptions. Culture largely impacts consumer behaviour in that a set of beliefs, attitudes and habits are shared by a society and transmitted between generations – ultimately influencing buyers' actions and preferences (Schiffman *et al.*, 2010). Funk and Ndubisi (2006) further expand on the link between colour, culture and religion. A cross-cultural study conducted by Wiegersma and Van der Elst (1988) found that blue was generally the most preferred colour amongst cultures. However, discrepancies in perceptions emerged amongst several other colours (Wiegersma and Van der Elst, 1988). Despite this, it is suggested that culture plays a significant role in attributing meanings to colours and thus influencing consumer preferences.

Culture can be defined as a complex, multi-faceted construct in a society made up of whatever it is one has to know or believe to operate in a manner acceptable to its members (Wardhaugh, 2002). For these cultural members to understand and transmit the above-mentioned knowledge and beliefs when interacting requires a mutually understood medium, i.e. language. Thus, a relationship between language (particularly mother tongue) and culture appears to exist (Elmes, 2013). It is therefore reasonable to assume that mother tongue language functions, to some extent, as a proxy for culture, especially in contexts where culture is somewhat difficult to identify and isolate.

2.3.3 The influence of age on colour perceptions. Psychological, biological, occupational and medical issues may be the reasons of age-related changes in colour preferences in adulthood (Dittmar, 2001). Several experiments demonstrate changing colour preferences in the progression from infancy to adulthood.

Contrary to adults' brightness preferences, infant colour preferences are affected by hue and saturation rather than brightness (Teller *et al.*, 2004). Pitchford and Mullen (2005) found that children's least preferred colours (brown and grey) are the ones that appear late in conceptual development. Accordingly, this suggests a possible link between the colour preference and colour cognition of individuals. It is further suggested that the colour preferences of children are presented before correct colour naming (Pitchford and Mullen, 2005). Thus, the relationship between linguistic evolution of colour terms and the organisation of colour perception in early childhood is another potential contributor to colour preferences in young children (Zentner, 2001). As in the case of cultural absorption, it is suggested that a mothers' use of colour while interacting with their children affects their children's colour preferences (Pitchford and Mullen, 2005).

2.3.4 The influence of gender differences on colour perceptions. Differences in the perception of colours between genders is noted throughout the literature. Khouw (2002) found that men were more tolerant of grey, white or black than women. This

reinforces the findings by Guilford and Smith (1959) who found that men were generally more tolerant towards achromatic colours than women. Thus, Guilford and Smith (1959) proposed that women might be more colour-conscious than men, exhibiting more flexible and diverse colour tastes (Khouw, 2002). McInnis and Shearer (1964) found that green was more favoured amongst women than men and that women preferred tints more than shades. A similar study by Greene and Gynther (1995) examined the ability of college students to identify colour and measure their vocabulary skills. They were asked to identify the colours of 21 coloured chips. The results showed that women recognised significantly more elaborate colours than their male counterparts.

Three significant trends appear in the literature. First, there appear to be differences in perceptions between what are referred to as "cool" versus "warm" colours. Second, such changes exist and appear to increase with ageing, resulting in colour preferences of individuals continuing to evolve throughout their lives (Söker, 2010). Third, it appears evident that there are distinct gender variations in the perception of colours (Khouw, 1995). Attention is now turned to the application of colour influences within the FMCGs sector.

2.4 The influence of colour in the FMCGs sector
2.4.1 An overview of FMCGs. Given that colour is a prime feature in the packaging of FMCGs, the effect of colour on purchase intent may be more apparent in a product where the distinction between the quality of competing brands is negligible; thus, selection tends to be based more heavily on aesthetics. For products with low advertising support, packaging takes on an even more significant role as the key vehicle for communicating the brand positioning (Deliya, 2012). FMCGs are products that are sold quickly at relatively low cost (Deliya, 2012). Although the absolute profit made on FMCGs is relatively small, they generally sell in large quantities, so the cumulative profit on such products can be substantial (Malhotra, 2014; Deliya, 2012). Typical examples of FMCGs include frequently purchased consumer goods such as hygiene products and consumer packaged food and drink products (Deliya, 2012).

2.4.2 The case for researching bottled water. Bottled water may be argued to fit the profile of a commodity product, due to the minimal differentiation in terms of the core product. Thus, the various bottled water brands are largely seen as being equal substitutes for one another, with the aesthetics being a core differentiator for the products. It has been reported that bottled water is amongst the most universally sold consumer products in the world (Noble *et al.*, 2009). In 2008, bottled water became the second ranked product amongst all US beverage types, after carbonated soft drinks (Noble *et al.*, 2009). In fact, beverages analyst, Feliciano (2014), claims that "with total volumes expected to eclipse 300 billion litres in 2014, bottled water will surpass tea as the world's most consumed packaged beverage".

In South Africa, the bottled water market is represented by both smaller, regional competitors as well as larger, multinational suppliers (BMI Research, 2011). Bottled water is available in several variations, including still, sparkling, flavoured and enhanced water variants, with still water accounting for a majority (67 per cent) market share (BMI Research, 2011). Moreover, bottled water is ubiquitously available throughout supermarket stores and convenience outlets in almost all urban areas. Bottled water is also steadily increasing its share in the market amongst

"non-traditional" bottled water segments, such as townships and rural areas (The Water Wheel, 2006). This further adds to the market size and consumer appeal of the product.

Given the rise in popularity of bottled water across the cultural and income spectrum in South Africa, together with its status as a major competitor in the beverages industry, bottled water was identified as a product category worthy of further examination in the current study.

2.4.3 The influence of colour on bottled water products. Nearly, all bottled water packaging uses the colour blue, albeit in varying hues, with additional, but less prevalent colours, including white, yellow and gold (Noble *et al.*, 2009). The prevalence of these blue shades is to further convey the feeling of freshness and purity (Noble *et al.*, 2009). Blue also has been found to have a subliminal association with water for many consumers (Noble *et al.*, 2009). Chou *et al.* (2009) researched the discrepancies in visual elements for identifying beverage package design and found that bottled water commonly features hues of black, white, blue or green, where brightness or a similar hue is used to reflect its purity and cleanness (Chou *et al.*, 2009). These studies suggest that marketers may thus have contributed to the development of colour preferences by creating associations over time and that marketers tend to advertise products in certain product categories with the same colours (Lee and Barnes, 1990).

While this provides a research-centric rationale for keeping packaging colours fairly consistent, the literature also suggests that colour can also be used to effectively differentiate a product (Grossman and Wisenblit, 1999). For instance, red is generally associated with soft drinks, but Pepsi built their marketing strategy upon the colour blue (Heath, 1997). In an almost uniform colour market, blue allows Pepsi to build its own associations and help consumers locate the product on the shelf (Grossman and Wisenblit, 1999). Furthermore, research conducted on the role of package colour on consumer purchase consideration and choice shows that when shoppers do not exhibit brand loyalty, or when they see no major differences between brands of a certain product class, a change in packaging colour is able to enhance brand consideration (Garber *et al.*, 2000).

2.4.4 Formation of hypotheses. Based on the research question and objectives outlined and the insights derived from the literature review above, the following set of hypotheses is stated for empirical analysis in this study:

- *H1.* The purchase intent for bottle water differs for different coloured bottled water packaging (cold, warm and neutral).

- *H2a.* The purchase intent for bottled water differs for cold and warm colour packaging.

- *H2b.* The purchase intent for bottled water differs for cold and neutral colour packaging

- *H2c.* The purchase intent for bottled water differs for warm and neutral colour packaging.

- *H3a.* Males and females differ in their purchase intent for different coloured bottled water.

- *H3b.* Purchase intent for different coloured bottled water differs by age group.

H3c. Purchase intent for different coloured bottled water differs by language.

H3d. Purchase intent for different coloured bottled water differs by income group.

3. Methodology
The research methodology used within this study is addressed below. Specifically, the research design, method, instrument and visual aids, sampling, data collection and analysis will be covered.

3.1 Research design
The study made use of a pre-experimental design, namely, a one-group pre-test post-test, adapted to three groups. This ensured that despite the use of three different treatment, each respondent was only exposed to a single treatment. Thus, the experimental design was formulated as follows:

$$EG_1: O_1 \, X_1 \, O_2$$

$$EG_2: O_3 \, X_2 \, O_4$$

$$EG_3: O_5 \, X_3 \, O_6$$

In Experimental Group 1 (EG_1), the respondents were exposed to treatment X_1 which is a graphic of bottled water with a label design in cold colours. EG_2 were exposed to treatment X_2 which is a graphic of bottled water with a label design in warm colours. EG_3 were exposed to a graphic of bottled water with a label design in neutral colours (X_3).

3.2 Research method
The research method for this study was adapted from four separate studies on the effects of packaging and colour (Boudreaux and Palmer, 2007; Kauppinen-Räisänen and Luomala, 2010; Percy and Rossiter, 1983; Veidung, 2011). Each of these studies, apart from Veidung (2011), created either a product (in the form of an advertisement) or label which they used to conduct the research. Kauppinen-Räisänen and Luomala (2010) conducted an exploratory study in which they created a brand of throat lozenges and a brand of painkillers, and then attempted to determine the product-specific colour meanings. Boudreaux and Palmer (2007) created 90 different wine labels for an online study assessing how the label design affected purchase intent and brand personality. Percy and Rossiter (1983) created advertisements for a fictional mineral water brand, named Espirit, and then used it to assess the effect of picture size and colour on brand attitude response. Finally, Veidung (2011) conducted a study on the effects of bottle water's design, source and brand on perceived quality and purchase intent. Similarly, for the purposes of this study, visual aids for a generic bottled water, merely labelled "Water", were created.

The labelling for each bottle type consisted of three different sets of colours: warm, cold and neutral (Kauppinen-Räisänen and Luomala, 2010) and yielded three separate visual aids. The measurement instruments for this study included a questionnaire coupled with the above-mentioned visual aids. As per the treatment design, each respondent was shown only one of the product images.

3.3 Research instrument and visual aids
The 22-item questionnaire made use of scales adapted from Stafford *et al.* (2002) as well
as Bloch *et al.* (2003).

Items 1 to 3 were cursory questions (Veidung, 2011), probing consumption of bottled
water. Items 4 to 14 were based on the effects of beauty and design on purchase behaviour
(Bloch *et al.*, 2003). Following Item 14, respondents were shown one of the six advertisements
and then instructed to answer Items 15 to 18 on purchase intent (Stafford *et al.*, 2002). Finally,
Items 19 to 22 were demographic questions deemed appropriate to the study. Questions 4-18
made use of a seven-point Likert scale anchored by (1) "strongly disagree" and (7) "strongly
agree". The study made use of an amalgamated scale for purchase intent, comprising the
work of Bloch *et al.* (2003), contributing scale items pertaining to purchase intent based on
design and aesthetic considerations, as well as generic purchase intent scale items sourced
from Stafford *et al.* (2002).

As alluded to above, this study utilised visual aids in conducting the experiment. A
generic version of bottled water was created featuring each of the colour sets. To reduce
the influence of shape, the bottle shape was standardised across all colour options. This
allowed the only differentiating factor to be the colour of the packaging. This was
congruent with the work of Kauppinen-Räisänen and Luomala (2010). Table II details
each visual aid.

As shown in Table II, the labelling for each bottle type consisted of three different
sets of colours: warm, cold and neutral. Red and yellow were chosen to represent warm
colours, blue and green for cold colours and black and white for neutral colours.

3.4 Sampling and data collection
A pre-test was conducted prior to data collection to determine if the bottled water visuals
accurately displayed colour, in terms of warm, cold and neutral. The questionnaire was
also pre-tested to determine whether respondents clearly understood the questions. The
questionnaire was then refined accordingly.

A non-probability convenience sample of 147 respondents was drawn, comprising of
three separate groups of approximately 50 respondents each. This size was based on the
samples of similar studies by Kauppinen-Räisänen and Luomala (2010) and Percy and
Rossiter (1983). Data were collected over a period of four weeks from two suburban
supermarket stores, ensuring that a wide spectrum of consumers was reached.
Each of the three groups was shown only one of the advertisements, as reflected in
Table III. Thereafter, they were instructed to answer a set of questions pertaining to that
specific colour.
Following the collected of the data, specific data analysis techniques were adopted to
obtain results; these techniques are outlined below.

		Label colour	
Visual aid	Warm (yellow/red)	Cold (blue/green)	Neutral (black/white)
A	X		
B		X	
C			X

3.5 Data analysis

Using the SPSS version 22 statistical analysis software package, independent samples T-tests and an analysis of variance (ANOVA) were utilised to test for differences in group means. Parametric tests were favoured, as the data were found to conform to the normal distribution (Hair *et al.*, 2010).

Further to the inferential statistics used to test the hypotheses, descriptive statistics were utilised to analyse the demographics of the sample obtained.

4. Results

The following section outlines the outcome of the empirical analysis of this study, commencing with the descriptive statistics, followed by an analysis of the data normality and hypotheses testing.

4.1 Descriptive statistics analysis

The data for nominal variables (control questions and demographic questions) was analysed at the outset. Table IV contains a summary of the frequencies of responses.

Based on Table IV, it can be seen that the respondent distribution was 37 per cent male and 63 per cent female. Almost two thirds (65 per cent) of respondents were between the ages of 18 and 25. The majority (71 per cent) of respondents' preferred language was English. The languages provided by respondents who chose "other" include Sotho, Setswana, Shona, Sepedi, Italian, German, Norwegian and Korean. Income levels of respondents were spread fairly evenly amongst the categories. Approximately 70 per cent of respondents had a monthly income of Rand 6,500 and below, whilst 19 per cent of respondents had a monthly income of Rand 17,000 and above. Only 11 per cent declared income between Rand 6,500 and Rand 17,000.

In terms of frequency of purchase, approximately 54 per cent of respondents did not buy bottled water very frequently and of the remaining 46 per cent, who purchased bottled water on a weekly basis, the majority of respondents only bought between 1 and 3 bottles per week. In terms of the primary reason for purchase, approximately 35 per cent of respondents acknowledged using price as the key influencer in deciding which bottled water to buy. Also rather influential in brand choice was the taste of the water and the attractiveness of the bottle. Interestingly, the brand as the key influencer in the decision process was only selected by a mere 16 per cent of respondents.

4.2 Data normality analysis

The purchase intent summated scale was tested for normality using the Kolmogorov-Smirnov test, as the sample exceeded 50 respondents. Table V details the results obtained.

Based on the outputs reflected in Table V, it can be seen that the null hypothesis cannot be rejected at the 5 per cent level of significance, with a test statistic of 0.053 and

| | | Colour | |
	Warm (yellow/red)	Neutral (black/white)	Cold (blue/green)
Treatment group	EG2	EG3	EG1

Table III.
The three experimental design groups

Frequency of purchase (%)	7+ bottles a week (6.8)	4-6 bottles per week (11.6)	1-3 bottles per week (27.9)	1-3 bottle per month (29.9)	Hardly ever (23.8)	
Reason (%)	Attractiveness (19.7)	Price (34.7)	Taste (20.4)	Brand (15.6)	Source (9.5)	
Age (%)	18-25 (65.3)	26-35 (17.0)	36-45 (6.8)	45-55 (5.4)	55+ (5.4)	
Gender (%)	Male (37.4)	Female (62.6)				
Language (%)	English (70.7)	Afrikaans (4.8)	IsiXhosa (12.2)	IsiZulu (5.4)	Other (6.8)	
Income (%)	R 0-R 1500 (23.8)	R 1,501-R 2,800 (22.4)	R 2,801-R 6,500 (23.8)	R 6,501-R 12,000 (8.8)	R 12,001-R 17,000 (2.0)	R 17,000+ (19.0)

Table IV.
Summary of
frequencies for
demographic
variables

p-value of 0.200. It can therefore be concluded that the data follow a normal distribution. Further to this, the skewness statistic falls between −1 and 1, and the Kurtosis statistic falls between −1.5 and 1.5, supporting the conclusion of normality.

4.3 Construct reliability and validity analysis

The purchase intent summated scale was assessed for reliability and validity using Cronbach's alpha and principle component analysis. The Cronbach's alpha was recorded as 0.911, exceeding the required 0.7 benchmark for reliability (Hair *et al.*, 2010), indicating a high degree of reliability. Validity was ascertained through a Principal Component Analysis, with all items loading onto a single factor. This single factor accounted for 68.7 per cent of the variation. Based on these tests, the Purchase Intent summated scale was deemed suitably valid and reliable.

4.4 Hypothesis analysis
4.4.1 H1.

H1. The purchase intent for bottle water differs for different coloured bottled water packaging (cold, warm and neutral).

ANOVA was applied to *H1* as this entailed testing the difference between three group means. The results revealed that the null hypothesis can be rejected at the 5 per cent level of significance with a test statistic of 4.258 and a *p*-value of 0.016. It can therefore be concluded that there is a significant difference in the purchase intent for different coloured bottled water packaging.

To further understand the inherent differences, a means plot was established (Figure 1). Here, it can be seen that neutral colours has a higher mean than cold and warm colours, and warm colours has a higher mean than cold colours. The means range between 3.8 and 4.8 which, on a seven-point scale, is indicative of a neutral response.

4.4.2 H2. This set of hypotheses made use of independent sample t-tests to test the difference between each colour separately to better understand the differences between the colour preferences. Table VI summarises the results of these tests.

The independent samples *t*-tests make use of a Levene's test to test for the equality of variance. Considering the results of Levene's test, we cannot reject the null hypothesis of equality for any of the *H2* hypotheses at the 5 per cent level of significance. Therefore, all the *H2* sub-hypotheses assume equality of variances:

H2a. The purchase intent for bottled water differs for cold and warm colour packaging.

The null hypothesis cannot be rejected at the 5 per cent level of significance with a test statistic of −1.1719 and a *p*-value of 0.088. It can therefore be concluded that the purchase intent for bottled water does not differ significantly for cold and warm colour packaging:

	Kolmogorov-Smirnhov			
Scale	Statistic	Significance	Skewness	Kurtosis
Purchase intent	0.053	0.200	−0.078	−0.568

Table V.
Summarised results
of normality testing
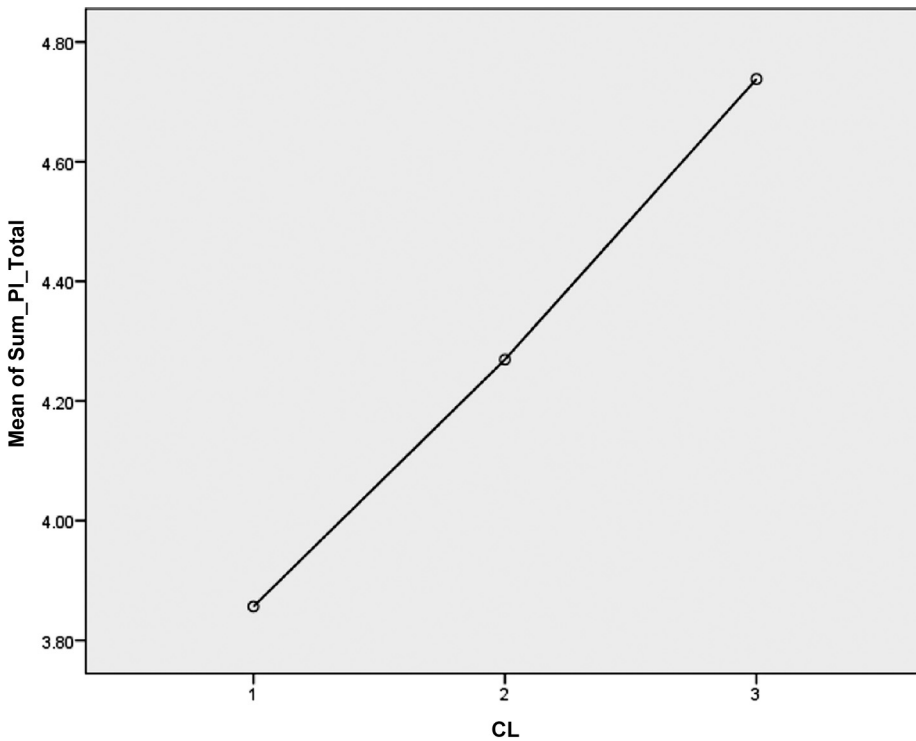
Figure 1.
Means Plot 1 for *H1*

| Hypothesis | Means | SD | Levene's test | | Test results | |
			Statistics	Significance	Statistics	Significance
H2a	3.86	1.35	3.329	0.071	−1.1719	0.088
	4.27	1.17				
H2b	3.86	1.35	0.295	0.589	−2.759	0.008
	4.74	1.19				
H2c	4.27	1.17	1.358	0.246	−1.821	0.071
	4.74	1.19				

Table VI.
Summarised results
for *H2a*, *H2b* and
H2c

    H2b. The purchase intent for bottled water differs for cold and neutral colour
        packaging.

The null hypothesis is rejected at the 5 per cent level of significance with a test statistic
of −2.759 and a *p*-value of 0.008. It can therefore be concluded that the purchase intent
for bottled water differs significantly for cold and neutral colour packaging. Neutral
colour packaging was found to have a higher mean (4.74) than cold colour packaging
(3.86):

    H2c. The purchase intent for bottled water differs for warm and neutral colour
        packaging.

The null hypothesis cannot be rejected at the 5 per cent level of significance with a test statistic of -1.821 and a p-value of 0.071. It can therefore be concluded that the purchase intent for bottled water does not differ significantly for warm and neutral colour packaging.

4.4.3 H3. The set of hypotheses for *H3* considered how the purchase intent for bottled water differed between various demographic cohorts. Based on the three colours sets (cold, warm and neutral), the results were split into three separate clusters of output, one for each colour set. All *H3* sub-hypotheses tested variations in purchase intent based on a particular grouping variable (age group, gender, language and income group); thus, independent samples *t*-tests and ANOVA were used in the analysis:

H3a. Males and females differ in their purchase intent for different coloured bottled water.

This hypothesis made use of a two category group and was therefore analysed using Independent Samples *t*-tests. Table VII summarises the results.

Based on Table VII, it can be seen that we fail to reject the null hypothesis for Levene's Tests at the 5 per cent level of significance. Therefore, all tests assumed equal variances.

Considering cold colour packaging, it can be seen that the null hypothesis cannot be rejected at 5 per cent level of significance with a test statistic of 0.877 and a p-value of 0.386. Therefore, it can be concluded that there is no difference in the purchase intent of males and females for cold colour packaging.

Considering warm colour packaging, it can be seen that the null hypothesis cannot be rejected at 5 per cent level of significance with a test statistic of 0.730 and a p-value of 0.467. Therefore, it can be concluded that there is no difference in the purchase intent of males and females for warm colour packaging.

Considering neutral colour packaging, it can be seen that the null hypothesis cannot be rejected at 5 per cent level of significance with a test statistic of -0.376 and a p-value of 0.710. Therefore, it can be concluded that there is no difference in the purchase intent of males and females for neutral colour packaging.

The set of *H3b*, *H3c* and *H3d* made use of grouping variables with more than two categories. Therefore, ANOVA was used to test these hypotheses. Table VIII summarises the results of these tests.

H3a	Means	SD	Levene's test		Test results	
			Statistic	Significance	Statistic	Significance
Cold	4.10	1.53	1.286	0.264	0.877	0.386
	3.71	1.24				
Warm	4.41	0.95	1.864	0.176	0.730	0.467
	4.20	1.25				
Neutral	4.66	1.27	0.116	0.736	-0.376	0.710
	4.83	1.15				

Table VII.
Summarised results for *H3a*

Hypothesis	Statistic	Significance
H3b: Age group		
Cold	4.123	0.050
Warm	0.407	0.803
Neutral	2.224	0.148
H3c: Language		
Cold	1.712	0.170
Warm	2.709	0.036
Neutral	1.630	0.209
H3d: Income group		
Cold	3.176	0.036
Warm	3.480	0.007
Neutral	2.808	0.049

Table VIII.
Summarised results
for *H3b*, *H3c* and
H3d

The hypothesis outcomes from Table VIII are analysed, consecutively, below:

H3b. Purchase intent for different coloured bottled water differs by age group.

Considering cold colour packaging, it can be seen that the null hypothesis cannot be rejected at 5 per cent level of significance with a test statistic of 4.123 and a *p*-value of 0.050. Therefore, it can be concluded that the purchase intent for cold colour packaging does not differ by age group.
Considering warm colour packaging, it can be seen that the null hypothesis cannot be rejected at 5 per cent level of significance with a test statistic of 0.407 and a *p*-value of 0.803. Therefore, it can be concluded that the purchase intent for warm colour packaging does not differ by age group.
Considering neutral colour packaging, it can be seen that the null hypothesis cannot be rejected at 5 per cent level of significance with a test statistic of 2.224 and a *p*-value of 0.148. Therefore, it can be concluded that the purchase intent for neutral colour packaging does not differ by age group:

H3c. Purchase intent for different coloured bottled water differs by language.

Considering cold colour packaging, it can be seen that the null hypothesis cannot be rejected at 5 per cent level of significance with a test statistic of 1.712 and a *p*-value of 0.170. Therefore, it can be concluded that the purchase intent for cold colour packaging does not differ by language.
Considering warm colour packaging, it can be seen that the null hypothesis can be rejected at 5 per cent level of significance with a test statistic of 2.709 and a *p*-value of 0.036. Therefore, it can be concluded that the purchase intent for warm colour packaging does differ by language. Reflecting on Means Plot 2 (Figure 2), it can be seen that the means differ between English and Afrikaans (Categories 1 and 2), IsiXhosa (Category 3), and IsiZulu and Other (Categories 4 and 5). IsiXhosa is shown to have the highest mean while English and Afrikaans have the lowest means. The means range between 4.00 and 5.25, resulting in a neutral response overall.
Considering neutral colour packaging, it can be seen that the null hypothesis cannot be rejected at 5 per cent level of significance with a test statistic of 1.630 and a *p*-value of
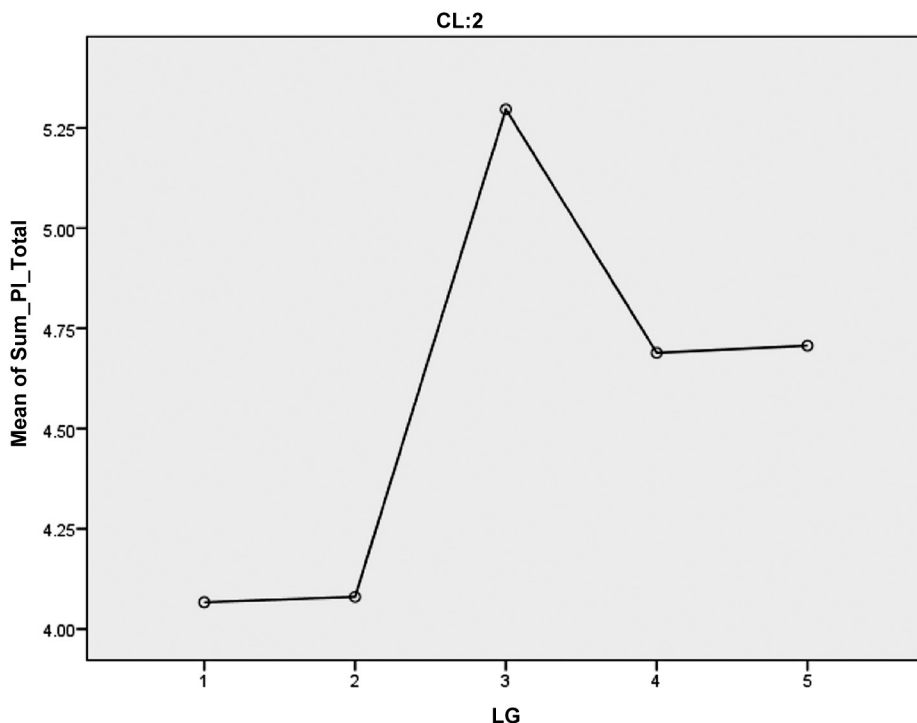
Figure 2.
Means Plot 2 for *H3c*

0.209. Therefore, it can be concluded that the purchase intent for neutral colour packaging does not differ by language:

> *H3.* Purchase intent for different coloured bottled water differs by income group.

Focusing on cold colour packaging, it can be seen that the null hypothesis is rejected at the 5 per cent level of significance with a test statistic of 3.176 and a *p*-value of 0.036. Therefore, it can be concluded that the purchase intent for cold colour packaging does differ by income group. Means Plot 3 (Figure 3) reveals that income differs for cold colour packaging in the Rand 2,801 – Rand 6,500 category (Category 3), which may be considered as low to medium income. Lower income ranges reflect a neutral response while medium incomes ranges reflect a disagree response.

Focusing on warm colour packaging, it can be seen that the null hypothesis can be rejected at 5 per cent level of significance with a test statistic of 3.480 and a *p*-value of 0.007. Therefore, it can be concluded that the purchase intent for warm colour packaging does differ by income group. Means Plot 4 (Figure 4) reveals that warm colour packaging differs for the Rand 1,501 – Rand 2,800 category (Category 2) which may be considered a low income category. The means range between 3.5 and 5.5 indicating a neutral response.

Focusing on neutral colour packaging, it can be seen that the null hypothesis can be rejected at 5 per cent level of significance with a test statistic of 2.808 and a
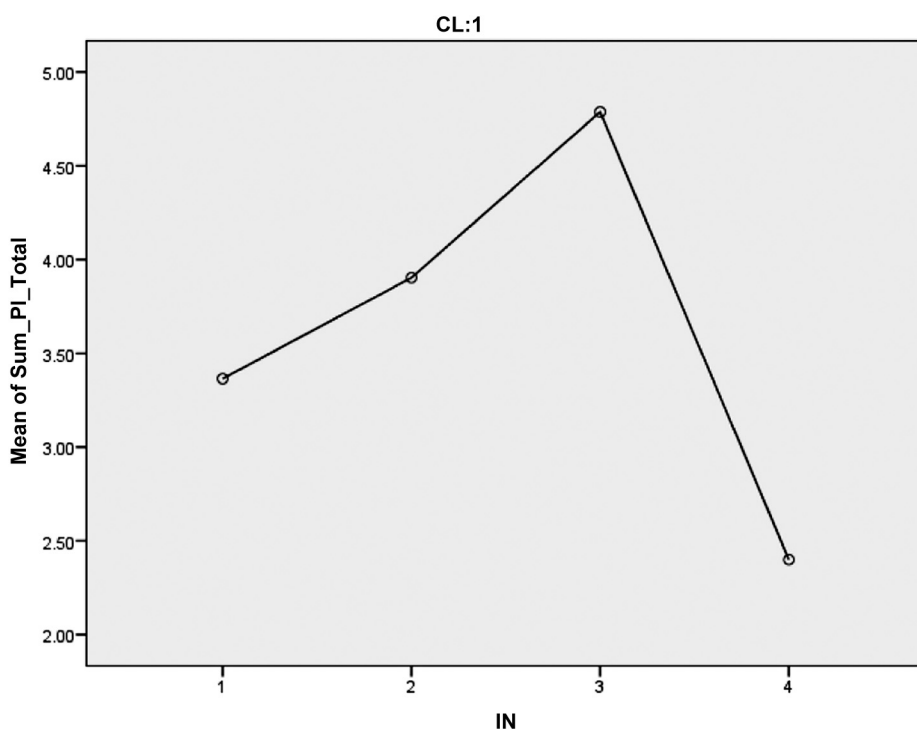
CL:1

Figure 3.
Means Plot 3 – cold
colours for *H3d*

p-value of 0.049. Therefore, it can be concluded that the purchase intent for neutral colour packaging does differ by income group. Means Plot 5 (Figure 5) reveals that neutral colour packaging differs for higher income categories Rand 6,501 – Rand 12,000 (Category 4) and Rand 17,000+ (Category 6). The means range between 4.0 and 6.0, indicating responses between neutral and agree. Lower incomes reflect a neutral response while higher incomes reflect an agree response.

5. Discussion
The purpose of this study was to determine whether package colour has an influence on purchase intent for bottled water. A number of key findings emerged from the research. The results for *H1* indicate that there is a difference in the purchase intent of bottled water for different package colours. In analysing the individual differences between package colours, it was identified that consumers have a greater intention to purchase bottled water if the colour of the packaging is neutral, followed by warm and, thereafter, cool colours. It is, however, important to note that the aggregate response was neutral, suggesting that even though there is a difference between the packaging colours, overall respondents remain neutral towards the colour of the water bottle packaging.

Amalgamated *H2* (*H2a*, *H2b* and *H2c*) considered the differences between each of the colours separately. The results reveal that the purchase intent for bottled water does differ significantly between cold and neutral colours, with the means indicating that
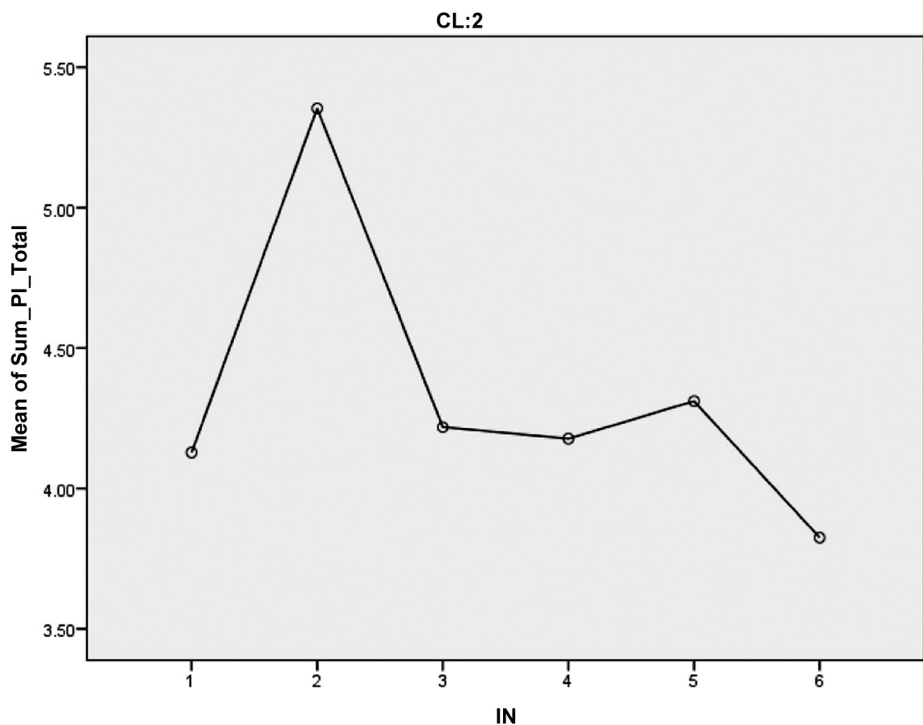
CL:2

Figure 4.
Means Plot 4 – warm
colours for *H3d*

neutral has a greater influence on purchase intent. The results also show that there are no significant differences between warm and cold colours, and warm and neutral colours. Again, it should be noted that the means fall between 3.8 and 4.8, which indicates a neutral response overall.

H1 and *H2* reveal that even though respondents appeared neutral between which colour packaging they choose, they tended to prefer neutral colours as opposed to warm or cold colours. This preference is particularly strong for the relationship between neutral and cold colours. This is significant in that many bottled water brands opt to use cold and neutral colour packaging for still bottled water, and the results of this study indicate that neutral colours may be most effective in soliciting consumers' attention and enticing them to purchase a particular brand.

Amalgamated *H3* (*H3a*, *H3b*, *H3c* and *H3d*) considered the differences in the purchase intent of bottled water for the demographic variables gender, age group, language and income group. The variable language was used a proxy for culture within this study. *H3A* indicates that there is no significant difference between male and female purchase intent for bottled water of different coloured packaging. However, this contrasts with the literature reviewed, where Khouw (2002) and Guilford and Smith (1959) found that men were more tolerant of neutral colour shades. It was also found women preferred cold colours more than men, with men more inclined to favour warm colours (McInnis and Shearer, 1964).
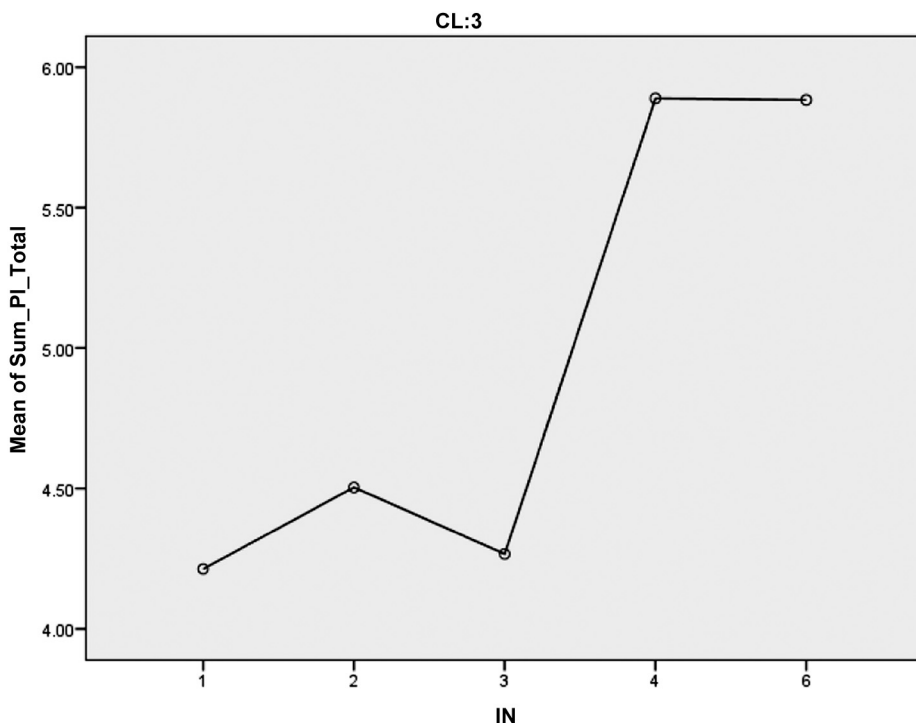
The outcome of *H3b* reveals that the purchase intent for cold, warm as well as neutral colour packaging does not significantly differ between age groups. This indicates that there was no preference for water bottle colour amongst different age groups. Again, this provides a contrasting perspective to the literature reviewed which highlighted studies confirming that age has a causal effect on colour preferences (Dittmar, 2001; Manav, 2007).

The outcome of *H3c* demonstrated that there was no significant difference in purchase intent for different language groups for cold and neutral colours but that there was a significant difference in purchase intent for warm colours. The results reveal that *Zulu*, *Xhosa* and *Other* home language speakers had a greater preference for warm colours than did English and Afrikaans home language speakers. With the *other* group encompassing mostly Ndebele and Sotho speakers, it can be concluded that the difference in purchase intent for warm coloured bottled waters amongst language groups stems mostly from those of African indigenous cultures, who are more inclined towards purchasing bottled water with warm colour packaging. This finding bears significance for marketers seeking to target products towards a particular cultural group, in that the findings reveal cultural-specific preferences for colours. This allows for a more targeted marketing campaign, making use of colouring inherently preferred by members of the target market.

Finally, considering *H3d*, it was found that purchase intent differs significantly for the various coloured packaging amongst different income groups. More specifically,

cold and warm colours were preferred by the lower income Categories (1 and 2) while the higher income Categories (5 and 6) were more inclined to neutral coloured packaging. Medium income Categories (3 and 4) are less likely to prefer cold colours, are somewhat ambivalent to warm colours, and are more likely to prefer neutral colours. Reflecting on Table I, it can be seen that the colour green, a cold colour, indicates inexpensiveness, which may be why it is preferred by lower income categories. Similarly, this indicates that black, a neutral colour, is seen as being expensive, which may indicate why it is a preferred choice amongst higher income categories. However, seemingly in contrast to this study's results, the table also indicates that the colours red and yellow, both warm colours, are symbols of high quality and expensiveness (Sable and Ackay, 2010; Aslam, 2005; Jacobs *et al.*, 1991).

6. Managerial implications
The traditional packaging colour adopted for bottled water appears to be blue an inherently cold colour (Noble *et al.*, 2009). However, little research has been done to support the effectiveness of this colour choice in comparison to different packaging colours (Kauppinen-Räisänen and Luomala, 2010). Through this study, it has been identified that neutral and warm colours could perform better than conventionally adopted blue packaging. Owing to the fact that bottled water is one of the most universally sold consumer products (Noble *et al.*, 2009), early adoption of neutral and warm colours to increase the purchase intention towards bottled water could result in a significant competitive advantage. Bottled water brands are advised to incorporate trial experiments to gauge consumers' purchase behaviour towards neutral and warm packaging colours. As a result global firms should take cognisance of this when considering package design formats for different geographical locations, income groups or culture-specific products.

It has also been shown that the purchase intent towards bottled water does in fact differ for various colour packaging – with neutral colours being preferred, followed by warm colours and, thereafter, cold colour packaging. This offers package design practitioners the scope for diversifying colour packaging of bottled water brands to differentiate their brands on the shelves from competitor labels. In the restructuring of their packaging or product strategy, however, this study revealed that a few demographic variables should be factored into this differentiation process, as they tend to influence the purchase intent towards certain colour packaging. Owing to the modern marketing environment becoming more complex and competitive (Deliya, 2012), the selection of segment-specific colours in product packaging can provide a powerful tool in influencing these consumers' purchasing behaviour (Garber *et al.*, 2000).

As this study concluded that males and females tend to be relatively indifferent in their purchase intent towards different coloured bottled waters, there appears little purpose in using gendered customisation to differentiate the packaging. This indicates that the use of what are typically considered male or female colours will not necessarily influence customers' purchase intent at the point of purchase. Furthermore, customers across all age groups were found to be indifferent in their colour preferences of still bottled waters. This suggests that differentiating packaging with brightness of colour for adults and more hue and saturation for younger groups, as suggested by Teller *et al.* (2004), may not be necessary. Given

these groups' indifference, using a customised colour packaging strategy to suit these individualised demographics of gender and age therefore may not be necessarily beneficial in attempting to influence purchase intent.

Findings in this study, however, reveal that consumers of different cultural backgrounds (as determined by mother tongue) tend to favour bottled waters of certain colour packages over others. If targeting such niche markets, consideration ought to be given to these colour preferences, as they are affected by the specific product type and that consumers prefer certain colours for certain products, particularly food products (Garber *et al.*, 2000; Kauppinen-Räisänen and Luomala, 2010; Koch and Koch, 2003). If targeting customers of particular African cultures for instance, water packaging with warmer colours is more likely to be well-received.

It is imperative that packaging designers understand which income segments will be targeted and thus what positioning they will assume for their brand, for example whether they seek to be positioned as a premium or a discount brand. This has implications for the colour usage on packaging, as the results revealed that lower income segments appear more drawn to warm colours in bottled water which can create the perception of a discounted product. Therefore, by focusing on the cultural attribute of favouring warm colours, bottled water brands with such packaging may attract a higher share of this market segment. The use of neutral colours was found to create the perception of a more premium product and thus found more appeal amongst higher income segments. The strategic use of colour to target these groups is important seeing, as anecdotal evidence in the course of the study revealed that bottled water is typically a leisurely purchase for higher income earners, who do not bulk buy the product. Thus, in addition to acting as a brand identifier, colour can also be used on the bottles as a cue for quality (Funk and Ndubisi, 2006; Garber *et al.*, 2000; Singh, 2006). Again, this would allow marketers to create more tailored marketing campaigns that seek to attract members of their target market based on their colour preferences aligned to their income levels.

Increased recognition for the role that packaging plays in creating differentiation for seemingly standardised consumer products has again been found to hold true in the current study. The research has outlined differing preferences for cultural groups and income levels, both of which could influence the purchase intent of these consumers.

7. Specific recommendations for SMEs and entrepreneurs

At present, it would appear that the market for bottled water is dominated by a small number of large producers in South Africa. This oligopoly scenario may be argued to stifle innovation from new, less formidable market entrants. Hence, opportunity therefore exists for smaller players, in the form of SMEs and entrepreneurs, to forge ahead with product development, in an attempt to win market share, taking into account the managerial implications of this research.

Bottled water is largely seen to be a commodity with little thought given to differentiation in the market with respect to colour scheme and packaging. This research unearthed that different income groups perceive the colour and packaging of the product differently, likewise for different cultural groups. In a highly diverse country such as South Africa, entrepreneurs and SMEs may wish to capitalise on these findings by pursuing innovative designs and branding strategies.

Thus, entrepreneurs could use this opportunity to test the market with smaller quantities of a bespoke brand of bottled water aimed at specific socio-economic market segments, deemed to be responsive to specific imagery. On the other hand, SMEs, acting either independently or as contract manufacturers for larger producers, could experiment with creating distinct brands or sub-brands, across a portfolio, to cater to different socio-economic and cultural segments. For example, customers of a particular ethnic background or religious cohort may be more responsive to a particular colour scheme. This appears yet to be trialed, despite such groupings wielding significant market power in a multi-cultural country such as South Africa. Naturally, market testing and research would be advisable prior to any wide scale product launch.

This also provides opportunity for grocery retailers to support local communities and to differentiate themselves through offering merchandise tailored to their customer base. Notwithstanding pack size and product variant modifications, development and differentiation appears to have stagnated, and recognition of distinct market segments appears lacking. As packaging innovation appears to be slow from the major competitors, including Coca-Cola, Nestle and the private label brands, entrepreneurs and SMEs may best be positioned to provide a spark in forging ahead and revitalising packaging development and differentiation.

8. Limitations and future research opportunities

The findings indicate that, in the context of this study, gender is not significant in influencing purchase intent for different colour packaging while various studies (Guilford and Smith, 1959; Khouw, 2002; McInnis and Shearer, 1964) delineate significant colour choices for males and females. Future research could therefore probe the differences between gender-based colour preferences both within the category of bottled water with the potential of expanding to consider other merchandise categories.

This study also shows that age group is not significant in influencing purchase intent for different colour, in contrast to other studies (Dittmar, 2001; Manav, 2007) that indicate otherwise. Future research is therefore advisable to probe the relationship between colour and age group across multiple merchandise categories.

Lastly, this study indicates that there are differences in colour preference amongst income groups. The study indicate that warm colours are most preferred by lower income groups while the literature (Aslam, 2005; Sable and Ackay, 2010) indicates that the warm colours red and yellow are often seen as indicators of expensiveness and high quality, traits often preferred by the higher income earners. Future research might shed some light on this seemingly contradictory viewpoint.

Lastly, it should be noted that while the findings of this study may hold true in the bottled water category, they may not necessarily hold true in other product categories. Future research could create comparisons between product categories to determine the role that packaging colour may play across categories.

References

Abbott, M., Holland, R., Giacomin, J. and Shackleton, J. (2009), "Changing affective content in brand and product attributes", *Journal of Product and Brand Management*, Vol. 18 No. 1, pp. 17-26.

Adams, F.M. and Osgood, C.E. (1973), "A cross-cultural study of the affective meanings of colour", *Journal of Cross-Cultural Psychology*, Vol. 4 No. 2, pp. 135-156.

Aslam, M. (2005), "Are you selling the right colour? A cross-cultural review of colour as a marketing cue", *Developments and Trends in Corporate and Marketing Communications: 1-14*.

Belizzi, J.A. and Hite, R.E. (1992), "Environmental color, consumer feelings and purchase likelihood", *Psychology and Marketing*, Vol. 9 No. 5, pp. 347-363.

Bellizzi, J.A., Crawley, A.E. and Hasty, R.W. (1983), "The effect of colour in store design", *Journal of Retailing*, Vol. 59 No. 1, pp. 21-45.

Bloch, P.H. (1995), "Seeking the ideal form: product design and consumer response", *Journal of Marketing*, Vol. 59 No. 3, pp. 16-29.

Bloch, P.H., Brunel, F.F. and Arnold, T.J. (2003), "Individual differences in the centrality of visual product aesthetics: concept and measurement", *Journal of Consumer Research*, Vol. 29, March, pp. 551-565.

BMI Research (2011), "Thirsty thoughts – bottled water category analysis", available at: www. fastmoving.co.za/activities/thirsty-thoughts-bottled-water-494 (accessed 14 March 2014).

Boudreaux, C.A. and Palmer, S.E. (2007), "A charming little Cabernet: effect of wine label design on purchase intent and brand personality", *International Journal of Wine Business Research*, Vol. 19 No. 3, pp. 170-186.

Chattopadhyay, A., Gorn, G.J. and Darke, P.R. (2002), "Roses are red and violets are blue – everywhere? Cultural differences and universals in colour preference and choice among consumers and marketing managers", Working Paper, Sauder School of Business.

Chebat, J. and Morrin, M. (2007), "Colours and cultures: exploring the effects of mall décor on consumer perceptions", *Journal of Business Research*, Vol. 60, pp. 189-196.

Chou, M.C., Chiu, P.H. and Wang, R.W.Y. (2009), "Employment of visual elements for identifying beverage package design discrepancies", Paper 172, International Association of Societies of Design Research, Seoul.

Clement, J. (2007), "Visual influence on in-store buying decision: an eye-track experiment on the visual influence of packaging design", *Journal of Marketing and Management*, Vol. 23 Nos 9/10, pp. 917-928.

Danger, E.P. (1987), *Selecting Colour for Packaging*, Gower, Brookfield, VT.

Deliya, M. (2012), "Consumer behaviour towards the new packaging of FMCG products", *National Monthly Refereed Journal of Research in Commerce and Management*, Vol. 1 No. 1, pp. 199-211.

Deliya, M. and Jarmar, B. (2012), "Role of packaging on consumer buying behaviour", *Global Journal of Management and Business Research*, Vol. 12 No. 1, pp. 49-67.

Dittmar, M. (2001), "Changing color preferences with ageing: a comparative study on younger and older native Germans aged 19-90 years", *Gerontology*, Vol. 47, pp. 219-226.

Elmes, D. (2013), "The relationship between language and culture", National Institute of Fitness and Sports in Kanoya International Exchange and Language Education Center, available at: www2.lib.nifs-k.ac.jp/HPBU/annals/an46/46-11.pdf (accessed 15 March 2014).

Feliciano, J. (2014), "Bottled water in 2014: packaging, branding, and the search for value", available at: http://blog.euromonitor.com/2014/02/bottled-water-in-2014-packaging-branding-and-the-search-for-value.html (accessed 14 March 2014).

Funk, D. and Ndubisi, N.O. (2006), "Colour and product choice: a study of gender roles", *Management Research News*, Vol. 29 Nos 1/2, pp. 41-52.

Garber, L.L., Burke, R.R. and Jones, J.M. (2000), "The role of package colour in consumer purchase consideration and choice", Working Paper, Marketing Science Institute.

Gorn, G.J., Chattopadhyay, A., Yi, T. and Dahl, D.W. (1997), "Effects of colour as an executional cue in advertising: they're in the shade", *Management Science*, Vol. 43 No. 10, pp. 1387-1400.

Greene, K.S. and Gynther, M.D. (1995), "Blue versus periwinkle: Color identification and gender", *Perceptual and motor skills*, Vol. 80 No. 1, pp. 27-32.

Grimes, A. and Doole, I. (1998), "Exploring the relationships between colour and international branding: a cross cultural comparison of the UK and Taiwan", *Journal of Marketing Management*, Vol. 14 No. 7, pp. 799-817.

Grossman, R.P. and Wisenblit, J.Z. (1999), "What we know about consumers' colour choices", *Journal of Marketing Practice: Applied Marketing Science*, Vol. 5 No. 3, pp. 78-88.

Guilford, J.P. and Smith, P.C. (1959), "A system of color preferences", *American Journal of Psychology*, Vol. 72 No. 4, pp. 487-502.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010), "Multivariate data analysis", 7th edition, Prentice Hall, Englewood Cliffs.

Heath, R.P. (1997), "The wonderful world of color", *Marketing Tools*, October, available at: www.demographics.com/publications/mt/97_mt/9710_mt?mt971022.tm

Hupka, R.B., Zaleski, Z., Otto, J., Reidl, L. and Tarabrina, N.V. (1997), "The colours of anger, envy, fear and jealousy: a cross-cultural study", *Journal of Cross-Cultural Psychology*, Vol. 28 No. 2, pp. 156-171.

Jacobs, L., Keown, C., Worthley, R. and Ghymn, K. (1991), "Cross-cultural colour comparisons: global marketers beware!", *International Marketing Review*, Vol. 8 No. 3, pp. 21-30.

Kauppinen-Räisänen, H. (2014), "Strategic use of colour in brand packaging", *Packaging Technology and Science*, Vol. 27, pp. 663-676.

Kauppinen-Räisänen, H. and Luomala, H.T. (2010), "Exploring consumers' product specific colour meanings", *Qualitative Market Research: An International Journal*, Vol. 13 No. 3, pp. 287-308.

Khouw, N. (1995), "The meaning of color for gender", available at: www.colormatters.com/khouw.html (accessed 2 March 2014).

Khouw, N. (2002), "The meaning of color for gender", available at: www.colormatters.com (accessed 2 March 2014).

Koch, C. and Koch, E. (2003), "Preconceptions of taste based on colour", *Journal of Psychology*, Vol. 137 No. 3, pp. 233-242.

Lee, S. and Barnes, J.H. (1990), "Using color preferences in magazine advertising", *Journal of Advertising Research* (January), pp. 25-30.

McInnis, J.H. and Shearer, J.K. (1964), "Relationship between color choices and selected preferences for the individual", *Journal of Home Economics*, Vol. 56, pp. 181-187.

Madden, T.J., Hewett, K. and Roth, M.S. (2000), "Managing images in different cultures: a cross-national study of colour meanings and preferences", *Journal of International Marketing*, Vol. 8 No. 4, pp. 90-107.

Malhotra, S. (2014), "A Study on Fast Moving Consumer Goods (FMCG)", *International Journal of Innovative Research and Development*, 3(1): 1-3.

Manav, B. (2007), "Color-emotional associations and color preferences: a case study for residences", *Color Research and Application*, Vol. 32 No. 2, pp. 144-150.

Noble, N., Paul, L., Mcminimee, C., Mallett, M. and Singh, J. (2009), "Packaging trends for bottled water", *Journal of Applied Packaging Research*, Vol. 3 No. 3, pp. 123-136.

Percy, L. and Rossiter, J. (1983), "Effects of picture size and colour on brand attitude responses in print advertising", *Advances in Consumer Research*, Vol. 10 No. 1, pp. 17-20.

Pitchford, N. and Mullen, K. (2005), "The role of perception, language, and preference in the developmental acquisition of basic color terms", *Journal of Experimental Child Psychology*, Vol. 90, pp. 275-302.

Sable, P. and Ackay, O. (2010), "Colour: cross cultural marketing perspectives as to what governs our response to it", *ASBBS Annual Conference: Las Vegas*, Vol. 17 No. 1, pp. 950-954.

Schiffman, L.G., Bednall, D., Cowley, E., O'Cass, A., Watson, J. and Kanuk, L. (2001), *Consumer Behaviour*, 2nd ed., Prentice Hall, NSW.

Schiffman, L.G., Kanuk, L.L. and Wisenblit, J. (2010), *Consumer Behaviour*, Pearson Education, NJ.

Schoormans, J.P.L. and Robben, H.S.J. (1997), "Effect of new package design on product attention, categorization and evaluation", *Journal of Economic Psychology*, Vol. 18 Nos 2/3, pp. 271-287.

Silayoi, P. and Speece, M. (2004), "Packaging and purchase decisions: an exploratory study on the impact of involvement level and time pressure", *British Food Journal*, Vol. 106 No. 8, pp. 607-628.

Singh, S. (2006), "Impact of colour on marketing", *Management Decision*, Vol. 44 No. 6, pp. 783-789.

Söker, B. (2010), "Color preferences: a commentary bibliography", *IAED 502* Graduate Studio II, Commentary Bibliography Series, available at: www.bilkent.edu.tr/artweb/htdocs/iaed/Program/cb/Soker.htm (accessed 9 March 2014).

Stafford, M.R., Stafford, T.F. and Day, E. (2002), "A contingency approach: the effects of spokesperson type and service type on service advertising perceptions", *Journal of Advertising*, Vol. 31 No. 2, pp. 17-34.

Stoll, M., Baecke, S. and Kenning, P. (2008), "What they see is what they get? An FMRI-study on neural correlates of attractive packaging", *Journal of Consumer Behaviour*, Vol. 7 Nos 4/5, pp. 342-359.

Teller, D.Y., Civan, A.L. and Bronson-Castain, K. (2004), "Infants' spontaneous color preferences are not due to adult-like brightness variations", *Visual Neuroscience*, Vol. 21 No. 3, pp. 397-401.

The Water Wheel (2006), "Bottled water sector bubbling over", available at: www.wrc.org.za/Knowledge%20Hub%20Documents/Water%20Wheel/Articles/2006/06/WaterWheel_2006_06_bottled%20water%20p18-21.pdf (accessed 1 May 2014).

Thompson, E., Palacios, A. and Varela, F.J. (1992), "Ways of colouring: comparative colour vision as a case study for cognitive science", *Behavioural and Brain Science*, Vol. 15 No. 1, pp. 1-74.

Trent, L. (1993), "Colour can affect success of products", *Marketing News*, Vol. 27, p. 4.

Underwood, R.L., Klein, N.M. and Burke, R.B. (2001), "Packaging communication: attentional effects of product imagery", *Journal of Product and Brand Management*, Vol. 10 No. 7, pp. 1-19.

Veidung, A. (2011), "What you see is what you choose: an analysis of a bottled water's design, source and brand and its influence on perceived quality and purchase intention", Master's thesis, International Marketing and Management, Copenhagen Business School.

Wardhaugh, R. (2002), *An Introduction to Sociolinguistics*, 4th ed., Blackwell Publishers, Oxford.

Wiegersma, S. and van der Elst, G. (1988), "Blue phenomenon: spontaneity or preference", *Perceptual and Motor Skills*, Vol. 66 No. 2, pp. 308-310.

Zentner, M.R. (2001), "Preferences for colours and colour-emotion combinations in early childhood", *Developmental Science*, Vol. 4 No. 4, pp. 389-398.

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