

COLOUR PSYCHOLOGY POTENTIAL IN LITHUANIAN ADVERTISING

Justinas Kisieliauskas¹, Evelina Sinevičiūtė²

Abstract. *The study examines the potential of colour psychology in Lithuanian advertising, acknowledging that the application of colour psychology may vary among countries. The theoretical overview outlines the concept of colour psychology and evaluates its use in advertising. The research objective is to assess how colour psychology can be effectively implemented in Lithuanian advertising campaigns. The study aims to explore the potential of colour psychology in Lithuanian advertising. The analysis will investigate the use of colour psychology in Lithuanian advertising. Methodology of the study included a review of the scientific literature and two structured questionnaire surveys of both consumers and industry experts. The study showed that when comparing user and expert surveys, both groups agreed that properly selected colours that evoke positive emotions have a strong influence on consumer emotions and even actions. However, when comparing the theory with the results obtained in the user questionnaire, it appears that Lithuanians assign slightly different associations to corresponding colours than foreign authors. Carefully selected colours that evoke positive emotions in advertisements can attract consumers' attention and potentially encourage purchases of the depicted brand. In order to choose the right colours to communicate in advertisements, it is important to analyse the audience to which the advertisement will be presented and to clarify the values that the brand cherishes and what the specific colour used in the advertisement is intended to tell consumers about the product or service.*

Key words: colour psychology, advertising, colours in advertising, colour associations, colour impact.

JEL Classification: M31, M37

1. Introduction

Relevance. In today's world, where new technologies, intense competition and ever-changing consumer needs pose greater challenges to businesses and advertisers, it is becoming increasingly difficult to stand out not only from the competition but also from a plethora of other information. In order to capture the attention of consumers and influence them through advertising, it is necessary to analyse its various components. Knowing the elements of advertising and how to combine them correctly allows the consumer to present advertising in a way that attracts attention, is remembered and ultimately influences. The value of advertising content depends on its attractiveness, interest and relevance. One of the most important components of advertising is colours and the science behind them called colour psychology, which can help to convey these elements and reach the desired audience.

The senses play a crucial and fundamental role in how humans perceive the surrounding world.

Among the five senses, vision is the most important. This is because the greatest amount of information reaches the user visually. Advertisements presented visually are an extremely favourable way to convey the desired information because the human brain uses the least amount of energy to understand the concept of the image.

Colours and their combinations are a very important element of communication. By choosing the right colours and using them correctly, one can effectively attract the attention of the desired audience, evoke the desired emotions, convey information and, as a result, increase sales. This can give a competitive advantage over other brands. According to Skarytė and Šliburytė (2017), 60 to 90% of consumers' involuntary decision is influenced by the visible colour. As far as the brand is concerned, about 90% of the colour used influences the formation of preconceived notions. Colours shape attitudes towards a particular product, service, brand or advertisement. They allow people to form a preliminary opinion about the price, quality

¹ Vytautas Magnus University, Lithuania (corresponding author)

E-mail: justinas.kisieliauskas@vdu.lt

ORCID: <https://orcid.org/0000-0003-4332-2192>

² Vytautas Magnus University, Lithuania

E-mail: evelina.sineviciute@vdu.lt



This is an Open Access article, distributed under the terms
of the Creative Commons Attribution CC BY 4.0

and perceived value of the communicated service or product. Colours also have a strong influence on people's moods and feelings.

It should be noted that colours for advertising should not be chosen on a global scale. According to Bailey (2019), the perception of colours can be drastically different in different countries. In each case, it is necessary to consider the cultural and demographic aspects of the country in which the advertisement or product packaging will be displayed. As different colours often have different meanings and evoke different emotions in different cultures, it is important to analyse and understand what emotional and physical reactions and associations the chosen colour, or its combination, evokes in the company's or organisation's target audience in a particular country. It is becoming more and more important for all companies and advertising professionals to understand the psychology of colour and how to use it effectively when creating advertisements or different brand elements.

The *object* of the study is the possibilities of colour psychology in advertising in Lithuania.

The *objective* of the study is to conduct a research that will reveal the possibilities of colour psychology in advertising in Lithuania after the theoretical disclosure of the concepts of colour psychology.

Tasks of the paper:

1. To reveal the principles of colour psychology through associations in advertising.
2. To prepare a research methodology for extracting the possibilities of colour psychology in advertising in Lithuania.
3. After conducting the research, compare the results with the existing scientific findings and identify the practices of applying colour psychology in advertising and provide possible recommendations to stakeholders in the Lithuanian market.

Research **methods**: analysis of scientific literature, structured questionnaire surveys of users and experts.

2. Literature Review

Colours have always played and continue to play an important role in human life. They are everywhere: in nature, at home, at work and even in advertising. They influence a person's mood, emotions, feelings, sensations, perceptions and even certain actions. This is exactly what colour psychology is, a science that studies the relationship between colours and human psychology (Minxhozi, 2016). It is a science that helps to understand how certain colours affect human behaviour, mood and physiological processes (Bailey, 2019). Harris (2018) supports this statement, adding that colour psychology focuses on how individuals understand colour and how it makes them feel. Colour psychology works by using people's

understanding of colour to make them feel certain emotions when they see an advertisement or product packaging.

The perception of colour itself is formed in the human brain. The pulse of light absorbed by the visual organs is sent to the brain, where it causes a sensation of colour (Singh, 2006). According to Westland and Won (2017), certain cells in the eyes are known to send signals to the hypothalamus, an intermediate part of the cerebellum. The hypothalamus is not involved in colour perception, but it is responsible for the release of hormones in the body. For example, if there is a lot of blue and green light in the morning, the body, with the help of the hypothalamus, releases cortisol, which inhibits the release of melatonin. When the number of light colours decreases in the evening, melatonin starts to differ and drowsiness occurs. This means that the body has a physiological mechanism by which colours can affect alertness, mood, heart rate, hunger or impulsivity.

Colour psychology is not an exact science. There are no right or wrong colours (Šliburytė and Skarytė, 2017). Each colour can have a subjective meaning for a person, which can be assigned to it by anyone. The effect of colours on a person can depend on certain associations with experienced impressions or on many other different factors. Some of them can be:

- Gender;
- age;
- education;
- culture;
- preconceived beliefs;
- life experience.

At least several factors can influence the effect of colour and how it is perceived. Nevertheless, colour psychology is often found today in marketing, art, design, fashion and other fields that seek to discover the relationship between colour and emotion. In marketing, colour psychology explains how colours affect consumers' impressions of a brand. It also includes research to understand whether colour influences consumer attention or purchase decisions. Colour plays an important role in product packaging, retail environments and online or offline marketing (Yu et al., 2020). Research proves that colour is the main marketing element in a company's visual communication (Šliburytė and Skarytė, 2017). Colours can help a company stand out from its competitors, act as an identifier, or even allow the user to guess the price and quality of the product being sold or the service being provided. According to Khalil et al. (2020), colours have the power to evoke different emotions through associations, which can also influence consumer behaviour. All this proves that the right choice of colour can help to achieve business objectives, such as increasing sales.

Various studies aim to reveal the associations and possible emotions evoked by the most popular colours. For example, according to Zainab and Okoli (2021), the emotional and physical effects and associations of colours on people are usually as follows.

Positive associations of the red colour: courage, strength, warmth, energy, masculinity, excitement. Negative associations: disobedience, aggression, tension. Red appears to be closer than it actually is, so it always catches the eye first. This is why this colour is used in traffic lights all over the world. Red also affects the physical state – it speeds up the heartbeat, giving the impression that time is passing faster than it actually is.

Positive associations of the colour blue: intelligence, communication, trust, peace and duty. Negative associations: coldness, aloofness, lack of emotion, unfriendliness. Blue is the colour of the erudite. This colour is not only associated with intelligence, but also has a calming effect. Bright blue and its shades stimulate clear thinking, while the pastel shades of blue are calming and allow one to concentrate. Blue objects do not appear as close as red ones. Most studies show that blue is the favourite colour of most people around the world. However, in certain situations in life, this colour can be seen as cold, unemotional and unfriendly.

Yellow positive associations: optimism, self-confidence, self-esteem, friendliness, creativity. Negative associations: fear, depression, anxiety, suicide. The right shade of yellow can lift one's mood and self-esteem as it is the colour of confidence, joy, happiness and optimism. Too much yellow or the wrong shade can lower self-esteem and cause fear and anxiety.

Green positive associations: balance, harmony, refreshment, security, positivity, environmental protection, equilibrium, peace, nature. Negative associations: boredom, stagnation, indistinctness, weakness. Green is a combination of blue and yellow, so it can be relaxing and calming, but also energising. It is a colour often associated with success or money.

Positive associations of purple: spirituality, awareness, restraint, luxury, authenticity, truth, quality. Negative associations: introversion, apathy, pressure, inferiority, nostalgia. Purple stimulates thought and perception and encourages deep reflection or even meditation. Purple is associated with greatness and usually reflects the quality of a service or product. Excessive use of this colour can lead to excessive introspection and give the impression that one is trying to communicate cheaply and sloppily.

Orange positive associations: physical comfort, food, warmth, protection, generosity, passion, abundance and fun. Negative associations: deprivation, frustration, frivolity, immaturity. Being a combination of red

and yellow, orange is a stimulating colour. Orange is considered to be a "happy" colour. Excessive use of orange can be associated with frivolity and a lack of intellectual values.

Positive associations of pink colour: physical peace, nurturing, warmth, femininity, love, sexuality. Negative associations: inhibition, helplessness, physical weakness. Pink, as a shade of red, has a physical effect, but at the same time it can be calming. Pink is a strong colour in psychology. It represents the principles of femininity. However, too much pink can be physically exhausting and make one feel a little powerless.

The grey colour is psychologically neutral. Negative associations: lack of confidence, dampness, depression, lack of energy. Pure grey is the only colour that has no psychological aspects. However, it is considered to be quite calming. The apparent lack of colour is depressing, and when the world turns grey, people instinctively want to colour it or succumb to it and sink into depression. Excessive use of grey usually indicates a lack of confidence and a fear of being seen.

Positive associations of the black colour: refinement, charm, physical security, emotional security, efficiency. Negative associations: oppression, coldness, threat, difficulty. The positive part of black communicates purity without nuance. It also perfectly represents sophistication and uncompromising perfection. There is a myth that wearing black makes people slimmer. On the negative side, black is associated with a lack of light, because nothing reflects from this colour, so some may find it threatening. This is why most people are afraid of black.

Positive associations of the white colour: hygiene, sterility, clarity, fluffiness, cleanliness, simplicity, refinement, efficiency. Negative associations: coldness, unfriendliness, elitism. While black absorbs colour, white reflects the entire colour spectrum. As a result, it can be tiring to look at for long periods of time. White can look harsh when used with warm colours.

Brown positive associations: warmth, nature, earthiness, reliability and support. Negative associations: seriousness, lack of humour, difficulty and lack of sophistication. Brown is usually composed of red, yellow and black. Because of the large amount of black used, it is associated with seriousness, but the other colours make it warmer and softer. Brown is associated with the earth and naturalness. It also stabilises the mind, grounds one and helps people to appreciate the little things in life.

Hunjet and Vuk (2017) state that the colour red is usually associated with energy, blue with confidence and calmness, green with naturalness and health, purple with luxury and high quality, orange with affordability, yellow with originality and creativity, and black with elegance and security. Mizgir (2007)

adds that red stimulates feelings of love, so it is often associated with love and passion. At the same time, it can symbolise suffering and sacrifice, strength, power and greatness. According to Olesen (2013), the colour blue is associated with security, trust, loyalty and responsibility. Green is the colour of harmony, security, growth and health. Red is the colour of action, energy, power, passion, excitement and danger. Orange represents youth, optimism, playfulness, success and friendliness. Yellow represents happiness, optimism, positivity and warmth. Purple represents spirituality, mystery and royalty. Black represents protection, strength, control, elegance, refinement and formality. Pink colour with compassion, love, femininity, sweetness, sincerity and tenderness. Brown colour with simplicity, reliability, seriousness, strength, comfort and support. White is associated with openness, clarity, cleanliness, innocence and freedom. Colour associations can often depend not only on the colour itself, but also on its hue. For example, light yellow is associated with happiness, cheerfulness and joy, while dark yellow can be associated with negative things (Seher et al., 2012).

By evaluating the colour associations in different countries (see Table 1), it is possible to understand the important role played by the culture of the country and the religion promoted in it, and how important it is to know this because, according to Bailey (2019), the perception of colours can be drastically different. In some places, the colour white is associated with happiness and purity. This is why women wear white dresses on their wedding day. For a person from another culture, white might be associated with sadness. In some cultures, the white colour is associated with death and mourning.

Therefore, certain colours that may be appropriate in one culture may have negative associations in another, which can damage the image of a brand or company.

Gender and age also play an important role in colour perception. It's no secret that women and men prefer different colours. According to Raspberry (2019), men tend to choose bright, contrasting colours, while women prefer softer colours. One study found that colours such as blue or green appeal to both genders, but purple is the favourite colour of many women, while men are often put off by this colour. However, the colour preferences of both sexes change with age (Brown, 2016). As people age, they are more likely to choose colours with shorter wavelengths, such as blue, green and purple, rather than colours with longer wavelengths, such as red, orange and yellow (Birren, 2013).

In conclusion, different colours have different effects on people. It may depend on various factors: gender, age, education, culture, beliefs, existing associations with certain colours and life experiences. Therefore, advertisers should carefully analyse their product, service or advertisement and the audience for which the product, service or advertisement is intended.

Labrecque and Milne (2012) state that despite the recognition of the effect of colour and its importance, there is a paucity of marketing related research. It should be remembered that colour is an integral part of advertising. Coloured images are more likely to attract people's attention and evoke stronger emotions. A study by WebFX (2020) found that 42% of colour ads are read more often than the same black and white ads. This fact is confirmed by a study conducted by Lap   and Masili  nait   (2001), which tried to find out whether colour advertisements in newspapers

Table 1
Meanings of colors in different countries

Colour	Geographical locations/associations
Red	Eastern countries: happiness and prosperity. Russia: communism and the Bolsheviks. India: purity. China: good luck, celebration. Western countries: excitement, danger, love, passion, stopping, Christmas and Valentine's Day.
Pink	Eastern countries: marriage. Korea: confidence. Western countries: love, children (especially females), Valentine's Day.
Orange	Western countries: creativity, autumn and Halloween. Ireland: religion.
Yellow	Eastern countries: holiness, greatness. China: nutrition, dignity. Egypt: sadness, mourning. Japan: courage. India: trade. Western countries: hope, helplessness, weakness, cowardice.
Green	Eastern countries: eternity, family, health, prosperity, peace. India and Islam. Ireland: patriotism, Catholicism. Western countries: spring, money, rebirth and Christmas.
Blue	Eastern countries: wealth and education. China: immortality and eternal glory. Iran: paradise, spirituality, mourning. Western countries: depression, sadness, conservatism.
Purple	Eastern countries: wealth. Western countries: royalty, power. Thailand: mourning.
Black	Eastern countries: career, knowledge, evil, mourning and hardship. Thailand: failure and evil. Western countries: funerals and death.
White	Eastern countries: funerals, mourning, help, children, marriage, peace, travel. China: death. India: disasters. Western countries: brides, angels, hospitals, doctors, peace.
Grey	Eastern countries: helpers and travel. Western countries: boredom, gloom, simplicity, sadness.
Brown	Western countries: completeness, earthiness, reliability, solidity.

Note: based on Girard (2019)

were more effective than black and white ones. The results of the study showed that ads using different colours were noticed more than twice as often as those using black and white. Although coloured ads attracted more attention, the effect of text in different colours was mixed. Red text attracted the most attention.

Ferreira (2019) confirms that it is the colour red in marketing that usually attracts the user's attention and gives a sense of urgency. She also claims that black in marketing symbolises power, elegance and sophistication. In a study conducted by Hallock (2003), he found that up to 42% of black colour is associated with high quality products. According to this study, blue is the second colour chosen by 19% of respondents. When respondents were asked which colour they associated with cheap goods, 26% chose orange and 22% yellow. Griber et al. (2018) state that most light colours tend to be associated with cheapness and darker colours with luxury. This claim is supported by a study by Yu et al. (2020), whose results showed that black and white advertising content dominated by black, white and grey is more effective when it features luxury items.

It is important to remember that colours can not only help the consumer decide on the price and quality of the product, but can also encourage them to take various actions. Colours are one of the most important elements that influence consumers' subconscious and this influences their shopping habits (Sewall, 1978). The importance of colour psychology in shopping is also supported by Aghdaie et al. (2014), who stated that after studying the psychological effects of colours on consumer shopping behaviour, it was observed that attractive colours used in product packaging have a positive effect on customer shopping behaviour. The study also showed that the colours of product packaging, which are targeted at specific age groups, have a positive influence on customer purchases. However, not only the design and colours of the product packaging, but also the environment in which the products are presented, have a significant impact on

consumer shopping behaviour. Seher et al. (2012) state that the relationship between colours and sales is very strong because it is the colours chosen by the packaging or the e-store that the consumer sees first and that influences their psychology.

Colours can also be associated with corresponding emotions or qualities attributed to a brand, product or other key marketing elements. Altarriba and Sutton (2015) tried to find out exactly what emotions colours evoke. The study involved respondents from Germany, Mexico, Poland, Russia and the USA. The results of the study showed that red is usually associated with negative emotions, and yellow with positive emotions.

In a survey conducted in Croatia, Hunjet and Vuk (2017) also tried to find out what emotions certain colours are associated with. The survey showed that people usually associate red with love and passion, blue with confidence, yellow with lightness and green with freshness. The survey also asked respondents which colour they thought was the least eye-catching, and 57% of respondents said red and 35% said yellow. Hallock (2003) also studied colour associations in the USA. Respondents were asked to associate colours with presented words that had no inherent colour association. More frequent associations according to various authors can be seen in Table 2.

In conclusion, different colours elicit different reactions from the audience. Therefore, after analysing the product or service being sold and knowing the reactions caused by colours, they can be used in the creation of advertisements and thus encourage the audience to form the desired image of the service or product, or even encourage them to take the desired action.

3. Research Methods

Due to the abundance of advertising content, most advertisements go almost unnoticed. As a result, the intense competition that prevails forces advertisers

Table 2

The most common colour associations in advertising

Colour	Associations
Blue	Loyalty, intelligence, calmness, coldness, trust.
Green	Naturalness, nature, health, harmony, growth.
Red	Power, passion, excitement, danger, energy.
Orange	Comfort, playfulness, success, affordability, friendliness.
Yellow	Creativity, happiness, cheerfulness, joy, warmth.
Purple	Luxury, quality, spirituality, victory, nostalgia.
Black	Elegance, security, power, formality, control.
Pink	Sweetness, femininity, love, sincerity, tenderness.
Brown	Simplicity, reliability, seriousness, strength, and support.
White	Hygiene, cleanliness, clarity, openness, freedom.

Note: based on Zainab and Okoli (2021), Olesen (2013), Mizgir (2007), Girard (2019), and Hunjet and Vuk (2017)

to use various tricks to make the desired advertisement stand out from the mass of other information. One such trick is colour. Colour is often one of the main and most important elements that strongly influence the emotions and actions of consumers. In addition, the right choice of colour can encourage consumers to pay attention to a particular brand, product, service or advertising campaign. Behind colours and their effect on consumers is a branch of science – colour psychology. This science helps to understand how certain colours affect human behaviour, mood, and physiological processes (Bailey, 2019). However, it is also important to remember that different colours work in different ways. This may depend on age, gender, education, beliefs, life experience or nationality. Therefore, it is important for advertising professionals working with Lithuanian audiences not only to know the psychology of colours, but also to consider what certain colours are associated with for consumers living in Lithuania when using them in advertisements.

Object of research. The possibilities of colour psychology in advertising in Lithuania.

Objective. To analyse the possibilities of colour psychology in advertising in Lithuania.

To achieve the stated research objective, the following research tasks were set:

Quantitative and qualitative research methods were chosen for the study. A structured questionnaire survey of users and experts was used. The survey method was chosen based on the experience of similar studies (Hunjet and Vuk, 2017) and the cost-effectiveness of this research method.

When studying the application of colour psychology in advertising, a questionnaire was prepared on the basis of theoretical analysis. The questionnaire consists of 12 questions. They can be divided into several parts.

- The first, introductory part describes the purpose of the study, emphasises anonymity, and thanks the respondents in advance for their time spent filling in the survey questionnaire.
- The second part contains questions aimed at finding out how respondents evaluate the use of colours in advertising and how they influence them.
- The questions in the third part of the survey attempted to identify colour associations. The presented table with 50 associations was compiled on the basis of scientific sources (Girard, 2019; Hunjet and Vuk, 2017; Mizgiris, 2007; Okoli and Zainab, 2021; Olesen 2013).
- The questions in the last part of the survey try to find out the demographic characteristics of the respondents (gender and age).

Sample of the consumer survey. According to the survey sample formula, the required number of respondents in the context of Lithuanian consumers

should be 384 with a margin of error of 5%. The Paniotto formula was used to calculate the survey sample.

The expert survey was conducted to find out not only consumers' attitudes to the colours used in advertising, but also to the modern practices of colour psychology used in advertising. In the study, an expert is a person who has the relevant knowledge to answer the questions presented in the questionnaire and has at least 2 years of experience in marketing.

In the study of the use of colour psychology by experts in advertising, the questionnaire and its questions were prepared on the basis of the questions presented in the consumer survey. The questionnaire consisted of 10 questions, which can be divided into three parts.

- The first, introductory part describes the purpose of the study, emphasises anonymity and thanks respondents in advance for their time in completing the questionnaire.
- The second part presents the questions that have been created taking into account the questions presented in the user survey.
- The questions in the third part of the survey were designed to find out what the experience of experts in the field of marketing is and whether they have sufficient experience in the application of colour psychology in advertising.

Sample of the expert survey. The determination of the required number of experts was based on the assumptions set out in the scientific article by Baležentis and Žalimaitė (2011). According to them, it has been proven that in modules of aggregated expert assessments with equal weights, the accuracy of decisions and assessments of a small group of experts is not inferior to the accuracy of decisions and assessments of a large group of experts. Therefore, 13 marketing experts who use colour psychology in their practice were selected for the survey.

Research ethics. In the consumer and expert surveys, respondents were not required to provide any identifying information when filling out the questionnaires. Both questionnaires began with a detailed description of the purpose of the study and where the data collected would be used. Filling in the questionnaire was considered as consent to participate in the study. The answers of the expert survey respondents who did not meet this definition of an expert – they did not have a longer work experience or did not apply the principles of colour psychology in their practice – were excluded from the study.

4. Results and Discussions

The survey was conducted using a user questionnaire and an expert questionnaire, which were filled out online. The study involved 406 respondents who

answered the questions posed to consumers and 12 marketing experts who shared their opinions in the expert questionnaire.

In total, 52.22% of men, 47.54% of women and 0.25% of people who chose the "Other" answer option took part in the consumer survey. Thus, according to the results, the distribution of women and men was almost equal.

Comparing the consumer and expert surveys, it is difficult to draw conclusions, as the questions and their number differ. Despite the fact that the questions were different, there were still significant differences and similarities, such as:

- Both the experts interviewed and the people who answered the questions presented in the consumer survey claim that colours that evoke positive emotions make people pay more attention to advertising that uses these colours.
- Both groups agreed that consumers are more likely to buy brands whose colours used in advertising evoke positive emotions.
- In many responses, experts highlighted that the most commonly used colours in advertising are red, green and blue. The frequency of their use is also confirmed by consumers, who say that the three most common colours they see in advertising are blue, red and green.

When looking at the associations that users have chosen to associate with the respective colours, and comparing them with the observations of experts about certain colours and their associations, several similarities can be seen:

- Experts note that many Lithuanians associate white with cleanliness. The results of the consumer survey show that this statement is supported by consumers themselves, as white is the colour most often associated with cleanliness and hygiene.
- The answers received from both groups also confirm the fact that dark colours, such as black or purple, are associated with luxury for many Lithuanians.
- Both groups also agree that green is associated with naturalness and blue with reliability.

Several differences were also noted:

- According to marketers, Lithuanians usually associate blue with seriousness and reputable companies. However, the results of a consumer survey show that most respondents associate blue with cold.
- According to experts, users associate yellow with promotions and affordability. However, the study showed that yellow is usually associated with warmth, cheerfulness, playfulness, joy and friendliness. At the same time, Lithuanians usually associate green with affordability.
- According to experts, the most commonly used colours (red, blue, green and black) have the same effect on users of both sexes and evoke similar associations. However, consumer research shows

that both women and men interpret blue, red, green and black differently. For women, blue is usually associated with cold, red with passion, green with nature, and black with formality. For men, blue is usually associated with support, red with love, green with growth, and black with seriousness.

To compare the results of the surveys with the information presented in the theoretical part, a table was compiled. Table 3 shows the five most frequently chosen colour associations in consumer research by gender. For comparison purposes, the table also presents the five most common associations with the following colours found in scientific articles and various sources: blue, green, red, orange, yellow, purple, black, pink, brown, and white.

In the table below (see Table 3), not all colour associations presented in the theory correspond to the choice of the respondents who took part in the study. For example, some colours have completely new associations that were not observed in the analysed theory:

- Women often associate blue with hygiene, while men associate it with spirituality.
- Women associate green with freedom, while men associate it with accessibility and friendliness.
- Red is associated with power for women and loyalty for men.
- For women, orange is associated with warmth, but when analysing the most common associations with orange among men, only one of the five associations presented corresponded to what was stated in the theory. Contrary to the theory, men usually associate this colour with warmth, harmony, confidence and intelligence.
- Yellow is associated with success for women and men, but men associate yellow with growth.
- For women, purple is associated with excitement, creativity and coldness, while for men it is associated with success and control.
- For both women and men, black is associated with seriousness and strength. However, men add more and often say that they associate black with reliability.
- Pink is associated with creativity for both women and men. Men also associate this colour with another association that has not been discussed in theory – warmth, and women – playfulness.
- Brown is associated with coldness, naturalness, and for men – with formality, strength and nostalgia.
- Women associate white with formality and spirituality, while men associate it with simplicity and calmness.

In conclusion, according to the study, colours that evoke positive associations influence consumers' emotions and actions. However, several associations attributed to the respective colours did not prove successful when compared with the most frequently

Table 3

The most frequent colour associations in scientific articles, sources and survey respondents' answers were analysed

Colour	The most frequent colour associations in the analysed scientific articles and sources	The most frequent colour associations in the sample of women	The most frequent colour associations in the male sample
Blue	Loyalty, intelligence, calmness, coolness, trust.	Coldness (31.54%), calmness (30.46%), loyalty (30.15%), hygiene (26.41%), and reliability (26.28%).	Support (21.96%), comfort (21.57%), energy (21.23%), spirituality (20.79%), and playfulness (20.39%).
Green	Naturalness, nature, health, harmony, growth.	Nature (45.51%), growth (41.18%), naturalness (36.23%), health (24.74%), and freedom (24.59%).	Growth (30.04%), nature (29.34%), friendliness (24.09%), affordability (24.07%), and naturalness (22.99%).
Red	Power, passion, excitement, danger, energy.	Passion (57.35%), love (52.30%), danger (47.49%), strength (41.98%), and power (35.84%).	Love (21.79%), passion (21.61%), danger (19.05%), strength (18.50%), and loyalty (16.67%).
Orange	Comfort, playfulness, success, affordability, friendliness.	Warmth (23.92%), cheerfulness (17.40%), joy (17.01%), playfulness (16.51%), and friendliness (15.96%).	Warmth (13.10%), harmony (12.36%), trust (12.13%), playfulness (11.65%), and intelligence (11.51%).
Yellow	Creativity, happiness, cheerfulness, joy, warmth.	Happiness (34.91%), joy (33.13%), warmth (31.99%), cheerfulness (29.50%), and luck (23.86%).	Happiness (25.00%), joy (21.50%), cheerfulness (20.75%), growth (19.76%), and success (18.63%).
Purple	Luxury, quality, spirituality, victory, nostalgia.	Nostalgia (15.49%), excitement (14.91%), creativity (14.12%), luxury (12.50%), and coldness (12.42%).	Luxury (12.92%), luck (12.17%), spirituality (11.83%), nostalgia (11.83%), and control (11.79%).
Black	Elegance, security, power, formality, control.	Formality (33.76%), seriousness (31.86%), elegance (29.54%), firmness (27.21%), control (26.47%).	Seriousness (14.72%), firmness (14.55%), reliability (11.67%), formality (10.88%), elegance (10.87%).
Pink	Sweetness, femininity, love, sincerity, tenderness.	Cuteness (35.46%), tenderness (24.24%), creativity (23.53%), femininity (23.47%), and playfulness (21.46%).	Femininity (19.44%), cuteness (18.84%), sincerity (17.84%), warmth (16.21%), and creativity (15.77%).
Brown	Simplicity, reliability, seriousness, stand strength, support.	Firmness (19.34%), seriousness (19.24%), simplicity (15.76%), naturalness (10.87%), and coldness (9.40%).	Seriousness (11.32%), formality (8.42%), strength (7.87%), nostalgia.53%), firmness (7.46%).
White	Hygiene, cleanliness, clarity, openness, freedom.	Cleanliness (45.09%), hygiene (39.79%), spirituality (26.92%), clarity (3.24%), formality (23.15%).	Cleanliness (20.55%), hygiene (18.29%), simplicity (10.82%), clarity (9.73%), tranquility (9.72%).

Note: based on the authors' research

repeated associations in theory, which should encourage representatives of the Lithuanian advertising market not to blindly rely on the results of research conducted in other countries, but to conduct additional research in the local market. It should also be noted that in most cases, according to the results of the study, the associations are different in the samples of women and men.

In the survey, respondents were asked about colours, the psychology of colours and their impact on emotions and actions, and were asked to assign the given associations to the colours. Therefore, the recommendations are formulated considering the relevance of the study. Based on the results of the study, their comparison and the interpretations presented, the following recommendations are made:

- To attract the attention of women with the help of the chosen colours in one's advertisement, it is recommended to use blue, red and yellow. After all, these are the colours most often used in women's advertising.
- It is recommended to use blue, green, and red to attract the attention of men with the chosen colours in the advertisement. These are the colours most often used in male advertising.
- Use darker colours, such as black or purple, when communicating to consumers that the product shown in the advert is a luxury item.
- Use white to show consumers in the advertising that it is a product associated with cleanliness.
- The colour red should be used to convey to consumers that the product or service shown in the advert is associated with love or passion.

– To emphasise to people that the brand depicted in the advert is associated with naturalness or nature, it is recommended to use green.

However, the authors note that a significant number of colour associations that were identified through the analysis of other authors' works in the theoretical part of the paper were not confirmed in the case of the study conducted in Lithuania, which prompted representatives of the Lithuanian advertising market to conduct additional research on the psychology of colour in the local market, to use the psychology of colour in social advertising in the most effective way.

5. Conclusions

The following conclusions were drawn in the course of the work:

1. Colour psychology is a branch of science that studies how a particular colour affects people, what emotions it evokes and what actions it encourages. Specifically in marketing, this branch of science explains how colours influence consumers' impressions of a brand and whether they persuade consumers to pay attention, remember or buy certain products or services. However, an important fact is that consumer perceptions of colour are also influenced by different demographics, as each person is an individual with specific characteristics or experiences.

2. Analysing studies related to the psychology of colours, it has been observed that colour advertising is more effective than black and white. In addition, the colours used in advertising have different effects on different people. Not only does the impact on people vary, but also the associations they have with certain colours.

3. After analysing the results of expert and consumer research, it can be concluded that positive colours attract consumers' attention and influence their

emotions and actions. The analysis of the research results allows to assume that positive emotions are caused by blue, green, red and yellow colours for Lithuanians, because these are the colours that are most often noticed and usually attract the consumer's attention. The experts also agree and emphasise that the most commonly used colours in advertising are blue, green, red and black. When analysing the research results, it is possible to identify discrepancies with the information provided by the experts. They argue that both sexes have the same associations with colours. However, research with consumers shows that women and men often make different associations with the colours presented. According to the analysis of the results of the consumer research, not all the colour associations presented in the theory correspond to the choices of the respondents who took part in the research.

Having analysed theoretical sources and studied the application of colour psychology in advertising in Lithuania, the following recommendations can be made:

1. It is noted that in order to attract more attention from women with selected colours in advertisements, it is necessary to consider the colours emphasised by women in the study. The results of the study show that women in Lithuania pay the most attention to blue, red and yellow colours. Therefore, it is recommended to use these colours, because according to the results of the research, only these selected colours are more often noticed by female representatives in advertisements than other colours.

2. The results of the study show that men in Lithuania pay the most attention to the following colours: blue, green and red. Therefore, it is recommended to use blue, green and red colours in advertisements to attract more men's attention. Because these colours are noticed by men more often than other colours.

References:

- Bailey, R. (2019). How Colors Affect Human Behavior. Available at: <https://www.thoughtco.com/color-psychology-and-human-behavior-4151666>
- Baležentis, A., & Žalimaitė, M. (2011). Ekspertinių vertinimų taikymas inovacijų plėtros veiksmų analizėje: Lietuvos inovatyvių įmonių vertinimas. Available at: <https://etalpykla.lituanistikadb.lt/fedora/objects/LT-LDB-0001:J.04~2011~1367176753634/datastreams/DS.002.0.01.ARTIC/content>
- Birren, F. (2013). *Color Psychology and Color Therapy*. Published: Martino Fine Books.
- Brown, E. (2016). Age And Gender-Based Color Preferences. Available at: <https://www.designmantic.com/blog/infographics/age-and-gender-based-color-preferences/>
- Fathollah, S., Aghdaie, A., & Honari, R. (2014). Investigating the Psychological Impact of Colors on the Process of Consumer Shopping Behavior. *International Review of Management and Business Research*, 3, 1244.
- Ferreira, N. F. (2019). Color psychology: how color meanings affect your brand. Available at: <https://www.oberlo.com/blog/color-psychology-color-meanings>
- Girard, J. (2019). Visual Color Symbolism Chart by Culture. Available at: <https://www.thoughtco.com/visual-color-symbolism-chart-by-culture-4062177>
- Hallock, J. (2003). Color Assignment. Available at: http://www.joehallock.com/?page_id=1281#online
- Hallock, J. (2003). Color Assignment. The University of Washington. New Media Communications 498. University of Washington.

- Harris, M. (2018). Color Theory and its Applications in Marketing as it Relates to Color Psychology. Available at: https://www.researchgate.net/publication/329487553_Color_Theory_and_its_Applications_in_Marketing_as_it_Relates_to_Color_Psychology
- Hunjet, A. (2017). The psychological impact of colors in marketing. Available at: <https://hrcak.srce.hr/192238>
- Hunjet, A., & Vuk, S. (2017). The psychological impact of color in marketing. *Valis Aurea*, vol. 3, no. 2. ORCID: <https://orcid.org/10.2507/IJVA.3.2.4.37>
- Khalil, Y. K., Shah, M., Haider, A., & Khattak, S. (2020). Color Psychology in Marketing. ORCID: <https://orcid.org/10.34260/jbt.v4i1.99>
- Labrecque, L. I., & Milne, G. R. (2012). Exciting red and competent blue: the importance of color in marketing. *Journal of the Academy of Marketing Science*, vol. 40(5), pp. 711–727. ORCID: <https://orcid.org/10.1007/s11747-010-0245-y>
- Lapė, J., & Masiliūnaitė, L. (2001). Spalvos įtaka reklamos poveikiui. ORCID: <https://orcid.org/10.15388/Psichol.2001.4418>
- Minxhozi, A. (2016). The Psychology of Colors. ORCID: <https://orcid.org/10.13140/RG.2.1.3051.6246>
- Mizgiris, R. (2007). Spalvotyra. Kaunas: Kauno taikomosios dailės mokykla.
- Olesen, J. (2022). Color Meanings – The Power and Symbolism of Colors. Available at: <https://www.color-meanings.com/>
- Raspberry, H. (2019). Color Psychology – Brilliant Helping Hand in UX Design. Available at: <https://uxstudioteam.com/ux-blog/color-psychology-in-ux-design/>
- Seher, T., Arshad, M., Ellahi, S., & Shahid, M. (2012). Impact of colors on advertisement and packaging on buying behavior. *Management Science Letters*, vol. 2(6), pp. 2085–2096. ORCID: <https://orcid.org/10.5267/j.msl.2012.06.011>
- Sewall, M. A. (1978). Market Segmentation Based on Consumer Ratings of Proposed Product Designs. *Journal of Marketing Research*, vol. 4(15), pp. 557–564.
- Singh, S. (2006) Impact of Color on Marketing. *Management Decision*, vol. 44, pp. 783–789. ORCID: <https://orcid.org/10.1108/00251740610673332>
- Šliburytė, L., & Skėrytė, I. (2017). The effect of color perception in marketing processes. Organizational management, systematic research. Kaunas: Vytautas Magnus University.
- Sutton, T. M., & Altarriba, J. (2015). Color associations to emotion and emotion- laden words: A collection of norms for stimulus construction and selection. *Behavior Research Methods*. May 19, epub ahead of print.
- Ulusoy, B., Jung, I., Griber, Y., Hanenburg, J., Arbab, S., Yohimura, K., Elhady, I., & Johansson, S. (2018). Color Associations in Different Cultures.
- Won, S., & Westland, S. (2017). Color meaning and context. *Color Research and Application*, vol. 42 (4), pp. 450–459. ORCID: <https://orcid.org/0000-0003-3480-4755>
- Yu, J. Xie, S., & Wen, J. (2020). Coloring the destination: The role of color psychology on Instagram. *Tourism Management*, 80. 104110. ORCID: <https://orcid.org/10.1016/j.tourman.2020.104110>.
- Zainab, B., & Okoli, K. (2021). Psychology of color preferences on textile clothing among students of abu, zaria. Available at: https://www.researchgate.net/publication/353261263_PSYCHOLOGY_OF_COLOR_PREFERENCES_ON_TEXTILE_CLOTHING_AMONG_STUDENTS_OF_ABU_ZARIA

Received on: 03th of September, 2023

Accepted on: 17th of October, 2023

Published on: 17th of November, 2023