Exploring color attractiveness and its relevance to fashion

Duje Kodžoman¹ | Aleš Hladnik¹ | Alenka Pavko Čuden¹ | Vanja Čok²

¹Faculty of Natural Sciences and Engineering, Department of Textiles, Graphic Arts and Design, University of Ljubljana, Ljubljana, Slovenia
²University of Ljubljana, Faculty of Mechanical Engineering, Chair of Engineering Design and Transportation Systems, Ljubljana, Slovenia

Correspondence
Duje Kodžoman, Faculty of Natural Sciences and Engineering, Department of Textiles, Graphic Arts and Design, University of Ljubljana, Ljubljana, Slovenia.
Email: dujekodzoman@gmail.com

Abstract
Many studies have been conducted on the phenomenon of color preference, with the aim of identifying the key color preferences. Most of the previous studies have been placing blue in the most preferred position and green-yellow in the least preferred position. This study was conducted online and aims to showcase new color preference trends in the digital age. The colors selected for this study were based on the colors most frequently mentioned in previous color studies. Here, we show an evaluation using 14 Pantone colors as stimuli on the sample of (N = 146) participants based on pairwise adjectives (attractive-unattractive). Principal component analysis and other multivariate statistics were used to examine participants’ color attractiveness. In addition, gender and age were examined to determine if they had an impact on color attractiveness ratings. Results show that participants tend to prefer distinctive colors (black, pink, yellow), but there are slight differences in preferences that could be related to the influence of gender and age.

KEYWORDS
attractiveness, color preference, emotion, fashion design

1 | INTRODUCTION

Research on color preferences began in the late 19th century and continues today. Color preferences are the tendency of an individual or group to prefer certain colors over others, but these preferences vary widely. From the literature review, preferences are fairly consistent being highest in the blue to green range and lowest in the yellow and yellow-green range.¹ This article provides a systematic review of the relevant literature. Color research of the 20th and 21st centuries is summarized and their results related to color attractiveness are presented.

According to Cambridge Dictionary,² the adjective attractive is defined as “very pleasing in appearance” or “arousing interest or pleasure”. Unattractive, on the other hand, is defined as “not appealing” to the senses or as “having no power to arouse interest.” A clear distinction should be made here between attractiveness in general and attractiveness in fashion. Attractiveness in general can last for decades (eg, relationships, architecture, ...), while attractiveness in fashion usually only lasts for a very short time, due to fast and constantly changing trends. The same is true for color attractiveness, its lifespan in the context of fashion can be noticeably short. However, color trends in fashion were considered in the selection of the samples, with a particular focus on color attractiveness in general.

People use colors to express their social identity, hierarchy, emotions, political attitude, personal identity, self-image, and aesthetic taste. What we choose to wear has...
become a statement, and fashion is all about alter ego—
who do I want to be today.  
One aspect of the meaning
and communication of fashion can be explained in terms
of colors in the psychology of clothing. Color is an impor-
tant factor in the visual appearance of products as well as
brand recognition, and it is critical for designers to under-
stand consumer color preferences as part of an effective
design plan. The purpose of this article is to identify cur-
rent color preferences and define which colors are most
attractive and least attractive to the respondents who par-
ticipated in the survey; and to compare the results with
previous research and define similarities and differences.

2 | COLOR PREFERENCE
THROUGH HISTORY

Color is crucial in creating attractiveness or unattrac-
tiveness. The use of color has become an important expres-
sion of who we are, how we feel, and what we believe.  
Color preference is an important aspect of visual experi-
cence, but little is known about why people generally like
some colors more than others.

Human vision and perception contribute to how a color
appears to an individual. Perception is unique to each indi-
vidual and is constantly changing due to the influence of a
number of variables. There is considerable variation in the
chromatic response of human observers, both within color
deficients and color normals.  
The use of color is important
to enhance aesthetic character.  
There are color attributes
such as brightness, chromaticity, and dynamic range that
affect how very similar or nearly identical colors appear
and can be perceived differently.  
It has also been found
that offices with a chromatic scheme are more pleasing,
attractive, satisfying, and dynamic than those with an achr-
omatic scheme. In this respect, the achromatic scheme
was found to be more formal and harmonious.  

Many studies have been conducted on color preference
phenomena with the aim of determining the preferences of
the population. The psychology of color preference has been
studied by researchers since the late 19th century. In the fol-
lowing literature review, we considered color preferences
from 1893 to 2020. Jastrow8 conducted one of the first docu-
mented studies of color preferences at the World's Colum-
bian Exposition in Chicago in 1893. In this study, 4556
visitors (2746 men and 1810 women) were asked to choose
their single favorite color from a set of 12 paper rectangles
that differed in color. The most preferred colors were blue,
red, light blue, and blue-violet. The less popular ones were
orange, yellow-orange, and red-orange.  
However, Jastrow's
method provides limited information about the relative
strength and the order of preference among colors, and has
no direct information about interindividual variation.

Walton et al9 collected results of experiments on color
preferences of men and women over a 14-year period
from 1910 to 1930, except for the gap from 1920 to 1928,
using the 18 Milton Bradley color papers as stimuli. The
highest preferences were for red and blue, while yellow
and orange were at the bottom of the rankings. Hue
alone is not sufficient to explain color preferences, as
other color attributes such as brightness and saturation
are also important, which was recognized by Dorcus10 as
early as 1926. All three color attributes or dimensions are
associated with color preferences and must be considered
when researching this topic.

By the late 1930s, color preferences had not changed
significantly. In 1938, George11 studied the color prefer-
ces of art and nonart college students. The scales of
color preferences were similar for both groups. Blue was
the most preferred color, followed by green and red.
Orange and yellow were alternately fifth and sixth in
both groups. Purple and white were the least preferred
colors in both groups.

In 1941, Eysenck12 used 10 Ostwald color papers as
stimuli and showed that there is a general order of prefer-
ence for colors. In his study, blue was again the most pre-
favored color, followed by red, green, violet, orange, and
yellow. Eysenck's description of a general preference
order is remarkably similar to Jastrow's list 50 years ear-
erlier and was largely confirmed by subsequent studies by
Granger13 and Guilford and Smith.14

In the 1959 study by Guilford and Smith,15 the results
showed that greens and blues were preferred, while yel-
low and yellow-green were the least preferred colors.

In 1969, Choungourian15 compared color preferences
of 160 male and female American, Lebanese, Iranian,
and Kuwaiti university students using eight color stimuli
(red, orange, yellow, yellow-green, green, turquoise, blue,
and purple). He found that red and blue had the highest
preference value among the American subjects, while
these colors ranked lowest among the Kuwaitis. On the
other hand, blue-green ranked last among Americans but
was most preferred by both Iranian and Kuwaiti subjects.
Thus, he concluded that cultural variables played a role
in determining color preferences.

In 1971, Mather et al16 tested color preferences on a
geriatric population using the basic colors—red, green, yel-
low, and blue. The order of preference for men was blue,
red, green, and yellow was least preferred. For women, the
order of preference was blue, green, red, and yellow was
least preferred. Thus, the only difference regarding gender
was based on the position of red and green.

McManus et al17 tested color pairs in 1981. A total of
31 colors were presented in 465 pairs, and their result
shows that there was a general preference for red, blue,
and violet-blue with a dislike for green-yellow and black.
The order of color preferences found in an adult study by Terwogt and Hoeksmā in 1995 is consistent with the results of earlier research by Eysenck. Within Western society, the favorite color of adults was blue, followed by red and green. White, yellow, and black were less preferred. Yellow and red had relatively high preference positions in the 7-year-old group, but even at this age the most preferred color was blue.

Studies from the 21st century are also largely consistent with studies from the 20th century. Hurlbert and Lind conducted a study with 138 university students to determine a preference for clothing colors. Purple-blue and blue dress colors were preferred and the least preferred dress colors were yellow-red and green-yellow.

The study by Palmer and Schloss formulated an ecological valence theory in which color preferences arise from people’s average affective responses to color-associated objects. They showed that people are attracted to colors associated with salient objects that generally elicit positive affective responses and repelled by colors associated with salient objects that generally elicit negative responses, again with blue in the most preferred position and green-yellow in the least preferred position.

In 2011, Simmons used a three-alternative forced-choice method to evaluate colors in the pleasure/arousal/dominance space with populations of British undergraduates. He found that pleasantness was highest for purple, blue-purple, and pink, and lowest for green, yellow-green, and orange. Simmons also found that the most “calming” colors were pastel blues and purples, and the most “mood-enhancing” were saturated reds and yellows.

Fortmann-Roe studied colors that Twitter users choose in their social themes. When designing the appearance of their Twitter page, users were able to select any color or combination of colors using a color picker. After analyzing over half a million Twitter accounts, the authors concluded that users most often chose shades of blue, cyan, and red, while they almost never selected shades of green. People also chose relatively bright colors, but saturation varied greatly between genders and individuals.

In Hanafy and Sanad’s study, colors were ranked from most preferred to least preferred as follows: blue (15%), white and purple (both 14%), red (11%), gray (10%), black (9%), yellow (9%), no preference (8%), orange (8%), and green (4%).

The findings of Jonauskaite et al. on general hue preferences confirmed previous findings. They found that, in general, green-blue (technically referred to as “cyan”) was the most preferred hue, and reiterated a general dislike for yellow.

Although we cannot say that there are some colors that are attractive regardless of the time period, it is obvious from the above-mentioned research that some colors are perceived as more attractive than others. We have summarized the results of 15 studies on color preferences in the period from 1893 to 2020. When it comes to the most preferred colors, blue is mentioned in all 15 studies, red in 10 of them, and green in 5. As for the least preferred colors, yellow is mentioned in eight studies, while orange and green-yellow are mentioned in five studies each. Thus, the most attractive color is blue, the second most preferred is red, followed by green, while yellow was found to be the least preferred color (Figure 1).

We have identified a structural color preference throughout the years, and this has served as the basis for selecting colors from the Pantone color system for textiles. The aim of the study was to check the arrangement of color preferences with an emphasis on fashion. Color trends in fashion design are subject to constant change. Due to the constant changing nature of fashion we wanted to check color attractiveness nowadays. The questions examined are as follows:

- Which of the 14 offered Pantone colors are the most attractive?
- Which of the 14 offered Pantone colors are the most unattractive?
- Do gender and age have an influence on color preferences?
- Are our findings supported or contradicted by previous studies, and what might be the cause?

The following hypotheses are proposed:

- **Hypothesis 1.** We assume respondents’ preferred color combination does not match the color combination found in the literature (ie, blue, red, or green).
- **Hypothesis 2.** We assume age, gender, and education have a significant effect on color perception.

### 3 Method

Fourteen color samples and a paired adjective metric unattractive/attractive were used to capture respondents’ color preferences. The methodology carried out to capture the emotional responses of the respondents consisted of: (1) database of color samples, (2) questionnaire design, (3) data collection, and finally (4) data processing which was carried out using principal component analysis (PCA) and multivariate analysis of variance (MANOVA).
3.1 | Specimen

Fourteen Pantone colors were selected to investigate color preferences. Data from previous literature was used to define and select the samples, based on the most frequently cited colors from previous research. Current trends in fashion were also considered in the selection of color samples.25 The specimens were coded according to the Pantone Matching System. A snapshot of the specimens can be seen in Figure 2.

3.2 | Questionnaire design

The focus of this case study was on attractiveness. This term represents the emotional feeling or impression that subjects have when interacting with a color. The questionnaire contained words arranged as adjective pairs (attractive and unattractive) on a 7-point scale (Semantic Differential), where 1 indicated that the participant strongly agreed with the adjective “unattractive,” while 7 indicated that a participant strongly agreed with the adjective “attractive” (Figure 3). The number 4 was considered as a neutral response.

3.3 | Evaluation subject

The 146 respondents were predominantly female, 62.33%, while 37.67% were male. Most of the respondents were 35 years old or younger (87%). In addition, many had a college degree (69.86%), while 30.14% had a high school diploma or lower level of education. All respondents of 47.26% were undergraduates, primarily studying fashion design (34.78%) and graphic design (33.33%). 44.52% were employed full or part time. The country of residence of most respondents was Croatia (55.48%), followed by Slovenia (23.29%). All respondents participated in the study voluntarily and their vision was normal or corrected to normal.

3.4 | Procedure

Respondents were asked to complete an online questionnaire. The 14 specimens were then presented individually with the adjective pair attractive-unattractive. The respondents were asked to fill in their feelings according to the given scale in the checklist. The questionnaire included two sections: (1) demographic data of the subjects, including age, gender, education, and occupation; (2) sensory experience, consisting of 14 questions. Colors were presented as rectangles (739 × 183 pixels) on a white background. All subjects were required to adjust their screen settings to maximize screen brightness.

3.5 | Data analysis

Participants’ color ratings were analyzed using multivariate statistics. First, descriptive and reliability statistics were conducted to determine how consistent participants’
responses were. Next, a MANOVA was used to determine if there was an effect of gender or age on color perception. The analysis was conducted using the SPSS 26 statistical software package. Finally, PCA was implemented in MATLAB software. PCA is a widely used data exploration technique based on dimensionality reduction that aims to identify general trends, patterns, and (dis)similarities in the original data set. The new variables—principal components (PCs)—are created as orthogonal linear combinations of the original variables. Their extraction is done successively so that each new PC captures as much as possible of the variance not explained by the previous PCs.26

### RESULTS AND DISCUSSION

The descriptive statistics presented in Figure 4 give us an insight into how each color was perceived by all respondents, presented with mean values ($M$) and taking into account a SD. The reliability statistic for the assessment of color attractiveness was tested using Cronbach’s alpha, which is $.505$ for ($N = 146$) responses. The result indicates that the consistency of the responses was lower than expected, but somehow appropriate, since this study involved demographically diverse participants. Based on this result, we decided to investigate further to find out what caused the variation in the responses. In this regard,

| ID | Specimen             | Colour information             | ID | Colour information       |
|----|----------------------|--------------------------------|----|--------------------------|
| 1  | Island Paradise 14-4620 | HEX #97d5eo
RGB (151,213,224)
HSL (189°, 54.1%, 73.5%) | 8  | Lapis Blue 19-4045
HEX #0c4c8a
RGB (12,76,138)
HSL (210°, 84%, 29.4%) |
| 2  | Freesia 14-0852     | HEX #f6602
RGB (255,214,2)
HSL (50°,100%,50,4%) | 9  | Sulphur Spring 13-0650
HEX #e5d717
RGB (213,215,23)
HSL (61°,80.7%,46.7%) |
| 3  | Pink Yarrow 17-2034 | HEX #d3076
RGB (209,48,118)
HSL (334°,63.6%,50,4%) | 10 | Sand 15-1225
HEX #c6b48c
RGB (205,180,140)
HSL (37°,39.4%,67.6%) |
| 4  | Desert Sage 16-0110 | HEX #97ae9e
RGB (187,174,158)
HSL (86°,9%,65,1%) | 11 | Orange Tiger 16-1358
HEX #d7133
RGB (253,113,51)
HSL (18°,98.1%,59.6%) |
| 5  | Ultra Violet 18-3838 | HEX #54b9b7
RGB (95.75,139)
HSL (259°,29.9%,42%) | 12 | Caramel Cafe 18-1148
HEX #b5737
RGB (139,87,55)
HSL (23°,43.3%,38%) |
| 6  | Bright White        | HEX #fff715
RGB (16,24,32)
HSL (210°,33.3%,9.4%) | 13 | Bright Green 15-5534
HEX #09bb5c
RGB (0,155,92)
HSL (156°,100%,30.4%) |
| 7  | Black               | HEX #101820
RGB (16,24,32)
HSL (210°,33.3%,9.4%) | 14 | Blazing Yellow 12-0643
HEX #d7133
RGB (254,231,21)
HSL (54°,99.1%,53.9%) |

**FIGURE 2**  Color samples (selected from the Pantone color system) used in the online survey. The ID indicates the order in which the samples were shown

**FIGURE 3**  Example of the questionnaire with a 7-level Likert scale and pairwise adjective
a MANOVA with pos hoc Bonferroni test was conducted to investigate the influence of gender or age on the responses. We found that age $F(42,383) = 1.66, P < .05$ and gender $F(14,131) = 1.77, P < .05$ had a statistically significant effect on the responses (Figure 5).

The test of between-subjects effects shows that statistically significant differences in means occurred when age was considered in relation to colors: UltVio $F(3,144) = 3.75; P < .05$, Black $F(3,144) = 3.82; P < .05$ and CarCaf $F(3,144) = 5.03; P < .05$. Statistically significant differences were also found between mean values of the female and male responses for the colors: BriWhi $F(1,145) = 5.37; P < .05$, SulSpr $F(1,145) = 6.91; P < .05$ and BlaYel $F(1,145) = 6.85; P < .05$ (Figure 6).

In the multiple comparisons, we can see that the mean scores for UltVio between the age groups (18-24) and (45-54) were statistically significant at ($P < .05$). The same pattern is seen for black color with statistically significant differences between the age group (18-24) and the (45-54) and for CarCaf color with ($P < .05$) (Figure 7).

Again, with higher mean scores of female respondents as compared to male respondents, the statistically significant difference is found for BriWhite, SulSpr, and BlaYel with ($P < .05$).

The PCA loadings and scores graphs for the first two PCs are shown in Figures 8 and 9, respectively. Since these two PCs account for as much as 89% of the total variance, the remaining 12 PCs contain mostly noise and are therefore not informative. As can be seen in Figure 8, the location of each color with respect to the horizontal axis (PC1) obviously corresponds to the perceived attractiveness: the least attractive ones, such as CarCaf,
DesSag, and SulSpr, are located on the left side of the plot and the most attractive ones on the right side: Black, PinYar, BlaYel, LapBlu. A more detailed discussion of this finding is presented below.

Although PC2 is responsible for only 3% of the original data variability, this PC can also be attributed actual, “physical” significance. The 14 colors are distributed along the vertical axis according to their chromaticity: at the top, we find achromatic colors with no hue, for example, DesSag, Sand, BriWhi, CarCaf, and Black. At the bottom of the graph are chromatic colors, such as PinYar, OraTig, Frees, BlaYel, and BriGre. There is some correlation between this distribution and the saturation values ($S$) of the colors (see Figure 2).
PC1-PC2 scores plot (Figure 9), apart from the obvious connections between the respondent ID and his/her color attractiveness preference—for example, participants who were particularly attracted to black (and repelled by CarCaf) were those located on the right-hand side of Figure 8, that is, data points designated as S52, S105, S2, S12, and so on—did not provide any important additional information.

Based on the mean values of the responses (Figure 4) and the PC1-PC2 charge diagram (Figure 8), we can conclude that brown (Caramel Cafe) was chosen as the most unattractive color in our study ($M = 2.59$, $SD = 1.7$). Brown is the color of chocolate, an attractive product for most people, but our results are consistent with the ecological valence theory of Palmer and Schloss. Caramel Cafe was the least attractive color in the 25 to 34 age
The importance of black in fashion is best evidenced by the fact that numerous fashion exhibitions have taken place on the use of black: Black in Fashion at Victoria and Albert Museum (1999) curated by Valerie Mendes,33 BLACK: Masters of Black in Fashion and Costume curated by Karen Van Godtsenhoven (2010) at Fashion Museum of the Province of Antwerp (MoMu),34 Black in Fashion: Mourning to Night curated by Danielle Whitfield (2008),35 to name a few.

All the previously mentioned exhibitions were dedicated to designers who developed personal interpretations of black, such as Comme des Garçons, Ann Demeulemeester, Junya Watanabe, Yohji Yamamoto, Raf Simons, Gareth Pugh, and many more.

It is important to mention that most of our participants had a design background. The participants of 47.3% were students, of which 73.91% were fashion and graphic design students. However, black was the most preferred color in the 25 to 34 age group ($M = 5.426$, $SD = 1.79$), followed by the 18 to 24 age group ($M = 5.220$, $SD = 1.97$), and the lowest value was recorded in the 45 to 54 age group ($M = 3.667$, $SD = 1.63$). Black is obviously popular with designers, but also with buyers in recent years. In a recent analysis of more than 183 000 dresses sold online in the United States, retailer Edited found that about 38.5% were black in some form, and according to their data from the third quarter of 2014 to the same point in 2017, black clothing for women grew significantly at a number of fast fashion brands—by 269% at Boohoo, 145% at Zara, and 114% at H&M.36 Clearly, people dressed entirely in black reflect the modern fashion system in which wearing black has become fashionable.

The second most attractive color is Pink Yard ($M = 4.77$, $SD = 1.8$). Pink is often associated with girls, but this color was not established as a female gender signifier until the 1940s, just before World War II.37 Both adults19,38,39 and children40-42 show gender differences in preferences for pink and blue, with women preferring pink more than men.43 Nowadays, however, everything from fashion to interior design to graphic design is pink. One of the most recent examples is the Spring 2016 runway, where designers such as Alessandro Michele for Gucci, Marc Jacobs, and Joseph Altuzarra showed collections dominated by pink. In 2012, salmon pink really started popping up everywhere, and in 2016, everyone started calling it “Millennial pink.” Millennials are the demographic cohort born between 1981 and 1996.44 They are currently between 25 and 40 years old, and 49.3% of the participants belonged to this age group. Pink was indeed the most preferred color in the 25 to 34 age group ($M = 4.897$, $SD = 1.77$), followed by the 18 to 24 age group ($M = 4.729$, $SD = 1.78$). Pink is the color most often associated with charm, politeness, tenderness, sweetness, and romance, and Millennials pink has proven its attractiveness and durability.

The biggest contradiction to previous color preference research was found regarding Blazing Yellow. Yellow was chosen as the third most attractive color ($M = 4.72$, $SD = 1.8$). On the other hand, yellow was reported as the least attractive color in 8 out of 15 studies from our literature review.5,8,11,13,15,17,18,23 Roberts et al45 found that both men and women rated the opposite sex as least attractive when wearing yellow T-shirts. Yet, psychologically, yellow is the “happiest” color in the color spectrum.

group ($M = 2.265$, $SD = 1.5$), but a statistically significant difference was found in the 45 to 54 age group ($M = 4.133$, $SD = 1.8$). The same age group showed a difference in preference for ultraviolet ($M = 5.267$, $SD = 1.5$) in contrast to age group 25 to 34 ($M = 3.632$, $SD = 1.8$). Apparently, preference for violet increases with age, which according to Birren,28 is due to the fact that maturity is associated with a greater preference for hues of shorter wavelength (blue and violet) than for hues of longer wavelength (red and orange).

The second least attractive color was gray (Desert Sage; $M = 3.28$, $SD = 1.9$), and the third least attractive was green-yellow (Sulfur Spring; $M = 3.51$, $SD = 1.9$). Sulfur Spring was significantly less preferred by males ($M = 2.964$, $SD = 1.8$) than females ($M = 3.835$, $SD = 2.0$). In the previously mentioned literature review, green-yellow was mentioned in 5 out of 15 studies14,17,19-21 and was always on the list of least attractive colors. According to the Ecological Valence Theory (Palmer and Schloss), preference for a particular color is determined by the combined valence (like/dislike) of all objects and events associated with that color. When we think about what unpleasantness these colors evoke, we should be aware of the fact that brown is associated with feces, mud, and rotting food; gray with prison and emptiness; what unpleasantness these colors evoke, we should be aware of the fact that brown is associated with feces, mud, and rotting food; gray with prison and emptiness; green-yellow with mucus and infections.

On the other hand, the most attractive color in our study was black ($M = 5.14$, $SD = 1.9$). This result differs from most previous research on color preferences, as the color black is often associated with negative associations. The effects of its stereotypes are well documented in the literature.29-31 for a review, see.4 Black, despite its unpopularity throughout the history of fashion, has received unprecedented recognition for its visual qualities as a design element in the contemporary fashion agenda. Of course, the relationship between the color black and fashion is far from having begun in the 21st century. Just to mention two examples—protestant bourgeois appeared in Flemish paintings of the 17th century dressed in black, with a white lace collar, and even more famous example is petite robe noire of Gabrielle Chanel, which appeared in 1926. Black is not culturally dependent and is perceived as expensive and powerful across cultures.32
One of the common factors is the idea that yellow is very cheerful and joyful and typically evokes a happy feeling. Yellow tends to stand out, and this could be why some find it off-putting and others find it attractive. In our study, women showed a higher degree of attraction to yellow ($M = 5.022$, $SD = 1.64$) than men ($M = 4.218$, $SD = 2.0$). In addition, a significant statistical difference was found in terms of gender preference for white, which was also more preferred by women ($M = 4.780$, $SD = 1.6$) than men ($M = 4.091$, $SD = 1.9$).

5 CONCLUSION

This study examined color preferences in relation to attractiveness across all decades of the 20th century. Both ends of the preference spectrum (unattractive and attractive) were measured, and ($N = 146$) subjects were used. The study was conducted online with the goal of revealing color preference trends in the digital age. The following conclusions were indicated in the results, and can be used to guide future research:

- Three most unattractive colors were: Caramel Cafe (brown), Desert Sage (gray), and Sulfur Spring (green-yellow). These results are consistent with the findings of previous studies showing that we are repelled by colors associated with negative connotations because of experiences we have had with them.
- Three most attractive colors were: Black, Pink Yarrow, and Blazing Yellow. These results did not replicate previous findings, but provided new findings in the literature. Subjects did not report that their most preferred color combination matched those found in the literature (blue, red, or green). This is because the stability of preferences depends on the time period and era we live in—all influenced by age, gender, and likely education.
- Some differences in color perception were found depending on the age of the respondent. We found a statistically significant age difference in relation to Black, Caramel Cafe, and Ultra Violet. Caramel Cafe and Ultra Violet were perceived as the most attractive colors by far in the 45 to 54 age group, while the same age group rated black as the least attractive.
- Some differences were also found between the two genders in color preference. The study found statistically significant gender differences in relation to yellow, white and green-yellow. All three colors were perceived as more attractive by women than by men.
- Results from our study show that chromatic colors have been perceived as more attractive than achromatic, with exception for black.

Limitation of our study is that not all colors were included. Our results are limited to exploring attractiveness of colors that are defined to be trendy in season autumn/winter 2020/2021 in the fashion industry. Future research should focus more on the development of new technologies and digital influences regarding color preferences and their effects. Current sustainable ways of thinking should also be considered as it is evident that color preference trends are shifting due to positive sustainability trends.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Duje Kodžoman https://orcid.org/0000-0001-7548-3535

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**AUTHOR BIOGRAPHIES**

Kodžoman Duje holds a MS in fashion and textile design, and he is currently a PhD candidate in the Faculty of Natural Sciences and Engineering at the University of Ljubljana, Slovenia. He works as a teaching assistant in the Faculty of Textile Technology at University of Zagreb, Croatia. His main research
interests are connected with the fashion design and psychophysics with an emphasis on clothing.

Hladnik Aleš holds a BS in chemistry from the Faculty of Chemistry and Chemical Technology, University of Ljubljana and a PhD in technical sciences from the Graz University of Technology, Austria. After spending 11 years at the Pulp and Paper Institute in Ljubljana, he joined the Department of Textiles, Graphic Arts and Design at the Faculty of Natural Sciences and Technology, University of Ljubljana in 2006. Apart from his pedagogical work in the fields of information-communication technology and interactive media, his research activities are centered around substrate and print (conventional and digital) quality assessment, image processing and analysis, application of statistical methods in natural sciences and engineering, and color science.

Pavko Čuden Alenka has BEng in textile design, BS and MS in textile technology and a PhD in textile science from the University of Ljubljana, Faculty of Natural Sciences and Engineering. After working in the knitting industry for 7 years, first as head of the production unit and then as head of the research and development department, she moved to the Department of Textiles, Graphic Arts, and Design at the University of Ljubljana in 1989, where she is a Full Professor and lectures in the field of mechanical textile technology, new product development, interior textiles and textile and clothing tradition. Her main research interests are knitting processes and functionalization of knitted structures, synergy of textile technology and design, development of new textile products, and textile and clothing tradition and heritage.

Čok Vanja holds an MA in industrial design from the University of Ljubljana, Academy of Fine Arts and Design and a PhD in engineering design from the University of Ljubljana, Faculty of Mechanical Engineering where she is a teaching assistant and a researcher. Her main research interests are product development processes, engineering design, Kansei engineering methodology, and user-centered design.

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