

Original Research Article

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روانشناسی رنگ لباس زنان در نگاره‌های منتخب از «شاهنامه طهماسبی» براساس نظریه «ماکس لوشر»*

Color Psychology of the Women's Clothing in Selected Paintings of «Tahmasp Shahnameh» Based on the Theory of «Max Loescher»*

Abstract

Problem Definition: Color, as one of the important visual elements, has been the Safavid school artists' focus. The numerous presence of women motifs in «Tahmasp Shahnameh» shows the high status of women in this period. Therefore, utilizing Max Loescher's approach to color psychology, we can study women's clothes in «Tahmasp Shahnameh». The present research is trying to answer these questions: According to Max Loescher's «color psychology» theory, what relationship did the artist use to draw women's clothes in «Tahmasp Shahnameh»? and “Which of the cold or warm colors has the artist been more influenced by”?

Objective: This research aims to identify the psychological ideas of the Safavid artist in drawing the color of women's clothes in «Tahmasp Shahnameh» based on Max Loescher's theory of color psychology.

Research Method: This research is qualitative and its method is descriptive-analytical. The data collection has been done using a library-based approach and through note-taking and reading images and tables as well as data analysis. The sampling method has been purposeful and due to the frequent presence of female figures, among the 258 paintings of «Tahmasp Shahnameh», 2 paintings have been selected for study using the mentioned theory.

Results: According to Max Loescher's color psychology, the artist of the Safavid era used the relationship of balance between cold and warm colors in using the element of color for women's clothes; in other words, he used both cold and warm color groups to color women's clothes. Regarding the current theory, the researched paintings are more colorful than warm colors in terms of color variety and the use of colors, and this shows that the artist of this period was more influenced by cold colors (blue, green). According to the mentioned theory, gray color, which is considered a neutral color, was not used for women's clothes, and textiles were also used to show the status of women.

Keywords

Color Psychology, Women's Clothing, Tahmasp Shahnameh, Max Loescher.

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Introduction

The element of color has a special status in works of art because color has a deep connection with human emotions. Color can study psychological dimensions in works of art; therefore, psychological theories can be used in the psychological analysis of works. Regarding color psychology studies, authors like «Max Loescher, Rorschach, Max Fister, Faber Birren, Rietberger, Itten and Wells, Elkwesky, Omar Mukhtar, Dodangeh, etc». can be mentioned who have studied and researched from various perspectives such as physics, the therapeutic dimension of color, etc. Max Loescher's color psychology is a psychological test that is used to identify the mental state of the subject by selecting a specific number of cold, warm, and neutral colors in this test and analyzing them according to the mentioned theory. Regarding the relationship between Max Loescher's theory of color psychology and the present research, it can be stated that in the history of Iranian painting, the element of color has always had an unbreakable connection with the spirit of artists, especially the artists of the Safavid period. Due to its expressiveness, color represents a person's mood and also indicates personal type, and the use of color in the clothes of human figures, including women's clothes, has been common in manuscripts of different periods. During the reign of Shah Tahmasp, who was also an artist, a Shahnameh was written in his name, whose other name is «Houghton Shahnameh». The variety of colors in this Shahnameh shows the artists' interest in the element of color, therefore, by considering the spirit of Safavid era artists and using Max Loescher's perspective on color psychology, we can understand the psychological dimensions of using color in drawing of women's clothes in this Shahnameh. The purpose of the current research is to identify the psychological ideas of the Safavid artist in drawing the color of women's clothes in «Tahmasp Shahnameh» based on Max Loescher's theory of color psychology. The current research seeks to answer two questions: «According to Max Loescher's theory of color psychology, what relationship did the artist use to draw women's clothes in «Tahmasp Shahnameh»? and “Which of the cold or warm colors was the artist more influenced by»?

Research Method

The present research is descriptive-analytical and qualitative, and it was conducted based on the theoretical foundations of color psychology of Max Loescher. Based on this theory, first, the 8 colors (blue, green, red, yellow, purple, brown, black, and gray) in Max Loescher's theory of color psychology correspond to the positions of the specified colors from number 7 to 0. Then, by identifying the main and secondary color groups, the analysis of the color categories is done. In this research, selected women's clothes from «Tahmasp Shahnameh» are studied. The data collection has been done using the library-based method and through note-taking, reading images and tables, as well as data analysis. The sampling method of the research was purposeful. Among the 258 paintings of «Tahmasp Shahnameh», 2 paintings that have the most connection to Max Loescher's theory in terms of color frequency have been selected for the study. The reason for the selection of the mentioned samples was the characteristics of the pictures, in terms of the presence of female figures in comparison to other pictures in «Tahmasp Shahnameh» and also the more diverse colors that were seen in the women's clothes in the selected paintings. In the present research, first, «the concept of color, psychology of color, and its effect on a person, color, and personality, and the status of women in the Safavid period» was studied, and in the second step, the examples studied were introduced, and finally, using a theoretical approach, the data analysis in the tables and the relationship between the color of women's clothes and

their status have been discussed. In the end, the collected data were analyzed and the results were obtained by the inductive reasoning method that combines observations and experimental information to reach the desired conclusion.

Research Background

Max Loescher's theory of color psychology can be seen in Persian literature and visual arts, including Iranian painting. Books and articles have been published in this regard. Among the studies conducted in connection with Max Loescher's theory of color psychology in literature and art, the following can be mentioned: The article entitled «Investigating color psychology in the works of Reza Abbasi» written by «Abdul Hosseini and Sayed Yousefi» (2014). In this research, the color in Reza Abbasi's works has been investigated using Max Loescher's theory, which shows that brown color has the highest color frequency expressing the lack of comfort and the black color indicates the abandonment of interest, the blue color seeks peace, the purple color is a mystical feeling, the red color is the rejected color in his works, and the gray color is the least frequent. Also, in another article entitled «Psychology of Colors in the Shahnameh» written by «Zabihnia Omran and Mohammadi» (2011), the black color which represents the eyes of the beautiful and the red color which represents power, life, and fire been investigated. Regarding clothes, the article entitled «Examining the relationship between social status and the choice of clothing color in the paintings of the Safavid period» written by «Mohebi, Hasankhani Qavam, and Amani» (2018) can be mentioned. In this article, the dressing style of people such as the king, nobles, lovers, dancers, workers, and dervishes is discussed in terms of understanding the symbols and discovering the meaning of the color of the clothes on the paintings of the Safavid period the purpose of which was to express the relationship between the color of the clothes and the dressing style of the characters of painting. The results show that warm colors are mostly used in the clothes of kings, aristocrats, lovers, and dancers, while cold and dark colors are used in the clothes of people such as Sufis and mystics, dervishes, workers, and the poor. Regarding the clothing of women and the writings of foreign Iranian travelers in their travelogues, the article entitled «Comparative study of women's clothing in the travelogues and paintings of the Safavid period» by «Vali Qojaq and Mehrpuya» (2017) can be mentioned. The mentioned article deals with the adaptation of women's clothing in the Safavid era and its reflection in travelogues based on images. The results show that it is not possible to definitively refer to the contents of the travelogues because in some cases, clothing has undergone changes and transformations during the Safavid period. The book entitled «Travelogue of the Shirley Brothers» by «Dehbashi» (1999) expresses the visual observations of the Shirley brothers on the social situation of Iran during the Safavid era. Regarding the evolution of clothing during the Safavid period, «Investigating the social presence of women and the evolution of clothing in the paintings of the Safavid era» is the title of an article written by «Taqavi and Mousavi» (2013). This article deals with the evolution of women's clothing with a descriptive and historical analytical approach. In the results of this article, it has been determined that non-court women had more freedom of action in choosing clothing compared to court women. In another article entitled «The function of color in Maulavi's Masnavi» written by «Fatehi and Qahremani» (2017), the function of black and white, as well as red and yellow colors and how they contrast and also the coexistence of some words are discussed. Also, in an article entitled «Applied Psychology of Colors (Pantone)» written by «Qolizadeh Ledari» (2012), the use of color in industry and products has been investigated. An article entitled «Color in the History of

Iran» written by «Mir Ahmadi» (1989) deals with the history of color in Iran from the perspective of historical periods and Quranic verses. In an article entitled «Analysis and review of colors in Islamic art» written by «Mir Hosseini» (2019), the meanings of colors from the perspective of Islam are discussed. It should be mentioned that in the mentioned research studies, the dimensions and the course of the social evolution of clothing in the Safavid period have been discussed more. The present article seeks to achieve new results by using the psychology of color approach regarding the visual text because this topic has not been addressed in the women's clothing of «Tahmasp Shahnameh» and filling this information gap is important and might be the difference of the present article with the results of previous studies.

The Concept of Color

Color deals with human life so much that it never is considered an unknown phenomenon. The concept of color is present in all dimensions of life and there cannot be a single definition of color (Chijiwa, 2017, 30-29). Various sciences such as physics, art, and psychology have provided different definitions of the element of color, each of which has distinctions. The element of color can be considered one of the most amazing scientific events of mankind. Dr. Elrich Beer, who is a famous Austrian psychologist, has done a lot of research on color. He believes that creatures cannot instinctively feel pleasure from the colors in nature because seeing colors and understanding them gives pleasure (Bakhtiari Fard, 2009, 10). From the physical aspect, color is the result of light hitting the surface of objects and reflecting it to the human eye. The act of seeing color is the responsibility of the eye, and from a scientific point of view, color is made up of light that is perceived using the power of vision. A light ray includes various types of transverse and longitudinal wavelengths. According to psychologists, the element of color is considered as an environmental factor and they believe that if the color is chosen consciously and purposefully by the person, it will cause the desired behavior of the person. By using color around people, it is possible to give people who are very emotional a feeling of relaxation and bring about change in less active people (Khajehpour & Samandi, 2010, 9). «Obviously, light and color have a psychological and physical effect on the viewer because they have been perceived by the eyes and experienced by the body» (Pahlavan, 2008).

Psychology of Color and Its Effect on People

Regarding color and its psychological effect on the human psyche, it has been stated that color is a window that opens to the depth of the mind and soul and has an effective influence on all living beings (Gimbel, 2007, 20). Color is present in states like consciousness or unconsciousness, as well as sleep. «The power of color to influence our body, mind, and soul is what gives it the ability to calm, excite, inspire and balance, create harmony and heal» (Wills, 2009, 12). In addition to the human psyche, colors also affect the human body and physiology. During experiments in which people were forced to think about the red color, it was found that this color increases blood pressure and also increases heart rate. Since this color affects the nervous system, especially the sympathetic system, it is considered a nerve stimulation agent. Regarding the blue color, the obtained results are just contrary to the red color; in other words, this color (blue) lowers blood pressure and heart rate. It should be noted that the dark blue color (navy) has a calming effect that results from the part of the parasympathetic autonomic nervous system (Loescher, 2007, 22).

Max Loescher's Theory of Color Psychology

Max Loescher was a Swiss psychologist and therapist who gained worldwide popularity due to the invention of the Loescher color test, which was a tool to determine the psychological state of people based on their color experiences. There are eight color cards in Max Loescher's theory of color psychology. Contrary to popular belief, green is considered the main color in this theory, not a secondary color. According to the instructions of this theory, each colored card has a specific number of its own, which must be selected by the testee in two separate stages of all the cards. It should be noted that in the present study, due to the lack of an artist, the colors were selected only once according to the level of color application in the selected women's clothes of «Tahmasp Shahnameh». The testee chooses his favorite colors in the order of his choice in eight positions. The first color chosen shows that this person is more interested in this color and has attracted the person's desire, and the color that he chooses in the eighth place shows that the person is not interested in that color. In this theory, the existing eight colors are divided into two primary and secondary groups; the primary colors include blue, yellow, red, and green, which have psychological priority, and the secondary colors are purple, which is obtained from the combination of red and blue, brown, which is made from the combination of three colors of yellow, red, and black, and gray, which is not considered as any color and black color which basically nullifies any color. The eight color cards in the mentioned theory are marked with codes 0 to 7, and the said cards create four color pairs, according to their function; the first two colors are categorized by a plus sign (+), the second pair by a cross sign (×), the third pair by an equal sign (=), and the last pair by a minus sign (-). The choice of the colors in this theory by the testee, in the order of their position, indicates the person's psychological reaction to the colors. Therefore, Max Loescher's theory of psychology reveals mental issues including the conscious and unconscious as well as the individual spirit. This theory has a relative perspective concerning color (Loescher, 2009, 18-50).

Color and Personality

According to Faber Birren, an American colorist, if people are interested in one or more colors, it indicates a healthy personality, and if people react more than themselves to one or more colors when faced with it, or people express distaste for the color, in both of these situations, people have an unbalanced personality (Bakhtiari Fard, 2009, 75). Color has the ability to discover a person's personality because each color has a specific meaning that affects the human psyche. Accordingly, it is possible to study people's personalities by conducting color experiments through the analysis of emotional states and mental thinking (Mukhtar Omar, 1997, 83).

Characteristics of Women's Clothing in the Safavid Period

«Tahmasp Shahnameh» is one of the exquisite works from the Safavid period, which contains magnificent paintings and is very rich in color variety. «This manuscript is 47×32 cm and contains 759 pages and 258 illustrations, which are unique in terms of content and glory. Among these, 118 paintings are in Iran and the rest are in museums abroad» (Pourjafar & Farrokhfar, 2008). «The time of the starting and editing of the book is not clear» (Pakbaz, 2000, 87); however, the only dated image of this manuscript is the image of Ardeshir and Gulnar Kaniz (bondwoman), which contains the number 934 (Canby, 2003, 50). Regarding non-Iranians who visited Iran during the Safavid era, and in the travelogues of some of them, the characteristics of women's clothing have been notified, among which,

«Shirley brothers» during the reign of Shah Abbas I and «Chardin» during the reign of Shah Abbas II and Shah Suleiman Safavid can be mentioned. «Chardin» says about Safavid women's clothing that «Iranian clothing shows the height and size more than the clothing of us Europeans. Women's clothes are the same as men's clothes. The shirt is called qamīs, it is open from the front to the navel. Women's top covers are longer than men's tops, as they reach to the heel. Women's belts are narrow and one thumb wide. Women cover their feet with half-boots that reach up to four fingers above the ankle» (Chardin, 1956, 222). During the reign of Shah Abbas II and Shah Safi, «Tavernier» was another non-Iranian person who had a similar opinion about the women's clothing of this period and wrote in this regard: «Iranian women's clothing is not separate from the upper body and the lower body. It is the overall clothing and is no different from men's clothes. It is open from the front and does not go down from the leg muscles. They don't tie their waists tight, their sleeves are attached to their hands and arms, and reach the back of their hands. The length of women's pants, like men's, reaches the heel. Iranian women's shoes are no different from men's shoes, and their colors are especially green, red, yellow, and purple» (Tavernier, 1982, 241). In the aforementioned travelogues, according to the time of the rule of the Safavid kings, all three non-Iranian travelers wrote their works after the time of the rule of Tahmasp Safavid king. Documenting events by artists is of great importance because through it one can find the clothing style of that period and study the style of the people of that time (Yarshater, 2003, 1986).

Research Paintings

Referring to «Tahmasp Shahnameh» as the main source and regarding the current research, 2 paintings with the theme of «Nightmare of Zahhak» and «Birth of Zal» which due to the matching color frequency, the presence of many women and the various colors of clothes are following Max Loescher's color psychology, has been selected among 258 illustrations of «Tahmasp Shahnameh». There are 12 women in Nightmare of Zahhak painting and 23 women in Zal's birth painting. In both paintings, there is architecture and women are present inside the mansion.

Nightmare of Zahhak Painting

Zahhak is described as a cruel person in the Shahnameh, and one of his mythological symbols is the two snakes that grow out of his arms. In this painting, 12 women are present in the upper part of the picture. This painting (Fig 1) narrates the scene of Zahhak's dream, where Zahhak is watching himself being killed by Fereydun in his dream world. The architectural part of this painting shows the presence of women and Zahhak (left corner) is placed among the girls of Jamshid. Due to the presence of walls and the inability to see the inside and outside, a part of Zahhak's bed and some organs of all the women present in this picture cannot be seen (Bani Asadi, 2014). In the present painting, the clothing of all the women is similar in terms of position, but only Shahnaz (the woman in front of Zahhak) has a coronet on her head, and she is not different from other women in terms of clothing (Taqavi & Mousavi, 2013).

Birth of Zal Painting

The birth of legendary people is outstanding in the Shahnameh. Artists have been inspired to depict this event according to the text of Shahnameh. Zal is Rostam Dastan's father, in this painting (Fig 2), the artist has drawn his birth in the presence of 23 women. Zal's mother

is seen with a crown on her head along with 7 other women in the upper left corner of the picture. There are 3 women in front of this scene. In the middle part of the picture, there are 12 women, some of whom are holding trays, which are probably prepared for the health of Zal's mother to complete the delivery.



Fig 1. «Nightmare of Zahhak», attributed to Mir Mosavar, 10th century A.D., Tabriz Safavid school. Source: Doha Museum of Islamic Arts.

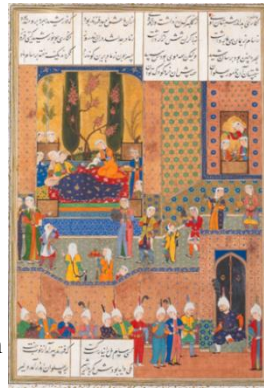


Fig 2. «The Birth of Zal», attributed to Mir Mosavar and Qasem Ali, 10th century A.D., Tabriz Safavid school. Source: Tehran Museum of Contemporary Arts.

Color codes and the psychological concept of eight color cards in Max Loescher's theory

1. Blue: Blue color reduces the excitement of the environment and calms the person. This color is always considered an interior color. The characteristics of this color can be mentioned as being smooth, refreshing, and soothing. This color makes a person think and causes mental and spiritual peace; blue color plays an important role in creating a calm personality (Cumming, 2005, 23). Blue is an allegory of the calmness of the sea and represents the sky, also this color represents beliefs and loyalty in humans; blue color can be considered to represent technology, and purposefulness (Amiri Chulandim, 2011, 211). Dark blue (navy) shows deep feelings. Among the characteristics of this color are self-centeredness, being inactive, having a spirit of partnership and sincere cooperation, irritability, understanding, and having a spirit of unity with others. Among the emotional views of the personality of people choosing blue color are seeking peace and comfort, wanting satisfaction, adaptability, love, and affection (Loescher, 2007, 38). People who choose this color in 6th to 8th positions cause the communication link between people to fall apart, which causes anxiety in the person (Loescher, 2001, 81). Blue and green colors both have a calming feature (Chijiwa, 2017, 53).

2. Green: The green color represents greenness, freshness, calming, and at the same time showing jealousy. The dark green color represents peace and an allegory of the palace tree (Chijiwa, 2017, 53). People who prioritize the color green have spiritual qualities such as the will to do work, perseverance, and endurance. The bluish-green color represents the stability and endurance of these people against changes. These people value themselves a lot and have a sense of belonging. This sense of belonging makes a person respect himself more. The people who put this color in their first choice, in fact, want to find more confidence in their intellectual values, and most importantly, they want to have their own way. They consider themselves sages and want to advise others (Loescher, 2009, 83). Green color has characteristics such as a sense of belonging, self-righteousness, defensiveness, self-reliance, and taking care of one's life and is unchangeable. Among the personality features of these people in choosing the green color, the spirit of unity and persistence, self-assertion, and militant spirit can be mentioned (Loescher, 2007, 39). In Max Loescher's

theory, the importance of green color is determined when this color is not placed in the second to fourth positions (Loescher, 2001, 86). Green color has different types and takes on certain meanings according to the conditions, this color is generally considered a relaxing color (Dee & Taylor, 2014, 58).

3. Red: Red color indicates happiness, passion, and enthusiasm. Dark red color, which is made by combining black color with red color, is known as an aristocratic color (Chijiwa, 2017, 50). Red color represents excitement and motivation to win and overcome problems, desire to achieve situations in life, and show sexuality. People who choose this color in the first position in Loescher's test are willing to have lively activities and have a spirit of leadership, effort, and creativity. This color causes blood pressure to rise, and in terms of symbolism, it is similar to the color of blood that is shed during victory in battle. Red color means strength of will, while green color means flexibility of will. Nervousness of people and loss of physical and sexual power are often identified by rejecting this color. Red is an attractive and energetic color in general (Loescher, 2007, 86). This color represents the power of will, action, and activity. The traits that are present in red color selectors are: extroverted, free, and having a sense of competition. In terms of emotional personality, these people have characteristics such as desire and enthusiasm, excitement, and dominant strong sexual desires (Loescher, 2007, 40). In terms of the sexual aspect, people who put this color in their primary state are honest towards their spouses, but in some cases, they easily obey their egos (Loescher, 2001, 87).

4. Yellow: Yellow color appears brighter than red. This color, like red, increases heart rate and blood pressure, but its performance is relatively less than red color. The main attributes of yellow color are brightness, shine, and happiness. Moreover, this color shows peace of mind and unimpeded development. Yellow is symbolically similar to sunlight. For people who choose this color in their first situation, it shows their liberation and hope for improvement. The yellow color represents forward progress and development. This is the opposite of green because yellow represents relief and freedom from responsibility, while the color green generally causes anxiety and also causes high blood pressure, and even seizures (Loescher, 2007, 90-91). Yellow is a bright color, and if this brightness is high, it causes reluctance and boredom in a person (Chijiwa, 2017, 51). In Chinese culture, the yellow symbolically belonged to the emperor and others did not have the right to wear this color (Itten, 1999, 16).

5. Purple: Because it is rare in nature, purple can be considered an artificial color (Chijiwa, 2017, 54). Purple is a combination of red and blue. This color tends to preserve the characteristics of red and blue colors, regardless of the fact that it loses its (red and blue) brightness. The expressed color is trying to retain the domineering features of red color and the relaxing aspect of blue color and make it into a form of identification, which causes a kind of mystical state and emotional intimacy. In this case, the mind and the goal merge together; In other words, everything we think about must come true. Purple color can be a combination of friendship and love and can also lead to intuitive understanding along with unrealistic and imaginary characters. People who choose this color want to achieve a magical relationship. In addition to wanting to find glory for themselves, these people also want to find glory for others (Loescher, 2007, 94).

6. Brown: The brown color is like fertile and blessed soil and looks sad like the autumn leaves (Chijiwa, 2017, 54). Brown is a combination of yellow and dark red. According to Loescher's opinion, this color has the character of passivity. Brown color loses the creative motivation of red color and the brilliance of yellow color and becomes a passive and inactive

color. «Therefore, the brown color indicates the feeling as it is applied to the physical senses. It has a sensory state that is directly related to the physical body [human body]. Its position in the color category tells about the sensory conditions of the body» (Loescher, 2009, 95).

7. Black: It is the darkest color in Loescher's test, which expresses the role of prohibition and invalidation and shows emptiness and destruction. Black, meaning «no», is just the opposite of white, meaning «yes». Black and white colors act as alpha and omega. The white color is the beginning and an allegory of purity, while the black color is considered the endpoint. In general, these two colors (black and white) are at extremes of exaggeration and extravagance. In Max Loescher's test, the closest color to white is yellow. If yellow and black colors are present in the same group, then they cause extreme behavior in the individual (Loescher, 2007, 97). In fact, this color makes a person unconsciously separate from the environment, because black color shows complete isolation (Pour Alikhani, 2001, 612). Black color includes negative meanings such as death and despair. Besides negative meanings, this color also has positive meanings such as being strong, insidious, and beautiful, which constantly affects the human psyche. In the past years, the way people think about the negativity of the role of black color has changed. In other words, people with positive vision deal with black color (Eiseman, 2014, 63).

8. Gray: The color gray can be created from the combination of black, white, red, blue, and yellow colors or a mixture of complementary pairs (Itten, 2014, 54). The gray color is considered as a neutral color because it is neither a subjective nor an objective color, and it is not even considered as an internal color. This color is neither anxiety-inducing nor calming. Gray color does not have a boundary between cold and warm colors. This color has a feature such as non-participation or «having nothing to do with others» (Loescher, 2007, 74). According to psychologists, the gray color shows messages such as reliability and confidence. This color is always new, neutral, and calm (Eiseman, 2014, 56). One of the incompatible features of this color is that it reminds us of old age. In general, gray color is known as a soulless color. When the gray color is placed in the vicinity of other colors and the colors of its group (neutral), it expresses strength or courage (Cooper, 2014, 50).

Analysis of Nightmare of Zahhak in «Tahmasp Shahnameh» based on Max Loescher's Theory

In this painting, based on the color psychology of Max Loescher, out of the 8 colors in this theory, 6 colors (blue, green, red, yellow, purple, and black) have been used to color the women's clothes in this Shahnameh. In total, 25 colors are used in the women's clothes in this image, among which, blue is used 7 times, green is applied 6 times, also, red and purple colors are used 3 times each, yellow color 5 times, and black color only 1 time for women's clothes in «Tahmasp Shahnameh». What has been said can be seen in Tables 1 to 3 as an analysis of one image of each color, and also the frequency percentage of the colors of the discussed image is shown in Diagram 1.

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Color Psychology of the Women's Clothing in Selected Paintings of «Tahmasp Shahnameh» Based on the Theory of «Max Loescher»

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Table 1. The main cold colors in Nightmare of Zahhak painting, based on Max Loescher's theory.

Source: Authors.





Colors			
Blue		Green	
Color	Painting	Color	Painting
			





Table 2. The main warm colors in Nightmare of Zahhak painting, based on Max Loescher's theory.

Source: Authors.

Colors			
Red		Yellow	
Color	Painting	Color	Painting
			

Table 3. The secondary colors in Nightmare of Zahhak painting, based on Max Loescher's theory.

Source: Authors.

Colors			
Purple		Black	
Color	Painting	Color	Painting
			

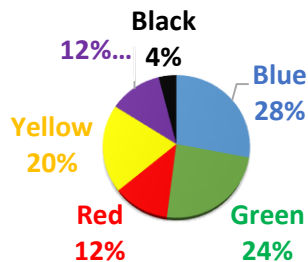


Diagram 1. The percentage of colors in Nightmare of Zahhak painting. Source: Authors.

Analysis of the birth of Zal painting based on Max Loescher's Theory

Fifty-two colors have been used in the women's clothing of the above-mentioned painting, among which blue is used 14 times more than other colors for the color of women's clothing. Green and red colors are used 13 times each, and yellow colors 8 times. Purple and brown colors have been used twice each (Tables 4 to 6). In this painting, like the previous painting, gray and black colors are not used for the women's clothes of «Tahmasp Shahnameh». Diagram 2 shows the relationship between the frequency of colors in the present painting.

Table 4. The main cold colors in the Birth of Zal painting, based on Max Loescher's theory. Source: Authors.





Colors			
Blue		Green	
Color	Painting	Color	Painting
			

Table 5. The main warm colors in the Birth of Zal painting, based on Max Loescher's theory. Source: Authors.









Colors			
Red		Yellow	
Color	Painting	Color	Painting
			

Table 6. The secondary colors in the Birth of Zal painting, based on Max Loescher's theory. Source: Authors.

Colors			
Purple		Brown	
Color	Painting	Color	Painting
			

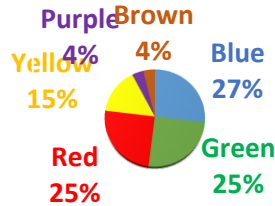


Diagram 2. The percentage of colors in the Birth of Zal painting. Source: Authors.

Analysis of Research Findings

Based on the findings of the research, in the Nightmare of Zakhak painting, and according to the arrangement of colors in Table 7, it can be stated that accordingly blue, green, yellow, red, purple, and black colors are placed together. The color pairs formed according to the amount of color occupation from the visual point of view include 3 groups of plus, cross, and equal (= × +). In Table 8, the classification of color pairs and in Table 9 the psychological expression of color pairs are proposed. The blue (+1)-green (+2) color pair group, according to Max Loescher's theory, represents a quiet, peaceful environment away from mental pressures; they put the events under their control with a lot of effort. They have a sensitive temperament and an eye for the future (Loescher, 2001, 44). The red (×3)-yellow (×4) color pair indicates inconstancy and sociability. This color pair needs the situation to go according to their expectations, otherwise, the stimulation can cause unstable or cursory efforts (Loescher, 2001, 165). The color pair purple (=5)-black (=7) indicates a lack of closeness to others (Loescher, 2009, 187). It should be noted that brown and gray colors are not used for the color of women's clothes in the mentioned painting. It is interesting to mention that the color pairs (blue-green) and (red-yellow) are used together in the painting under discussion, but the color pair (purple-black) is not like this.

Table 7. The arrangement of colors in the Nightmare of Zakhak painting. Source: Authors.

Color	Blue	Green	Red	Yellow	Purple	Black
Code	+1	+2	×3	×4	=5	=7

Table 8. Classification of color pairs in the Nightmare of Zakhak painting. Source: Authors.

Group 1 (+)	Group 2 (×)	Group 3 (=7)
Blue	Red	Purple
Green	Yellow	Black

Table 9. Psychological expression of color pairs in the Nightmare of Zakhak painting, based on Max Loescher's theory. Source: Authors.

Color Pairs	(Blue-Green)	(Red-Yellow)	(Purple-Black)
Painting			
Psychological Expression	Freedom from spiritual pressure	Inconstancy	No proximity to others

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The arrangement of colors in the Birth of Zal painting is as follows: blue, green, red, yellow, purple, and brown colors, placed next to each other (Table 10). According to the amount of color occupied from the visual viewpoint, 3 groups and 3 pairs of colors (x, +, and =) have been used, just like in the Nightmare of Zakhak painting. Table 11 shows the classification of color pairs and Table 12 presents the psychological expression of color pairs. Blue (+1)-yellow (+4) pair expresses passion and emotional ingenuity (Loescher, 2009, 145). Red (×3)-green (×2) pair shows the feeling of strength and power (Loescher, 2009, 165). Purple (=5)-brown (=6) pair presents the concept of a proud and at the same time shy person in expressing feelings (Loescher, 2009, 187). The (blue-yellow) and (red-green) pairs in the painting under discussion are placed together like the previous painting, but the (purple-brown) pair is not like that.




Table 10. The arrangement of colors in the Birth of Zal painting. Source: Authors.

Color	Blue	Green	Red	Yellow	Purple	Black
Code	+1	+2	×3	×4	=5	=6

Table 11. The classification of color pairs in the Birth of Zal painting. Source: Authors.

Group 1(+)	Group 2(×)	Group 3(=)
Blue	Red	Purple
Green	Yellow	Black

Table 12. Psychological expression of color pairs the Birth of Zal painting, based on Max Loescher's theory. Source: Authors.

Color Pair	(Yellow-Blue)	(Red-Green)	(Purple-Brown)
Painting			
Psychological Expression	Seeking help from others and mutual understanding	Dominance over obstacles and problems	Being self-centered

Based on what can be said from the analysis of the researched paintings, the three groups of color pairs, including plus (+), cross (×), and equal (=) were utilized in the women's clothes of «Tahmasp Shahnameh» while the pair of minus group (-) has not been used in the above paintings. From the pair group of plus (+) respectively (blue-green) in the Nightmare of Zakhak painting and (blue-yellow) in the Birth of Zal painting, from the pair group of cross (x) (red-yellow) and (red-green) and from pair group of Equal (=), (purple-black) and (purple-brown) are used in the paintings under discussion. According to what has been said, in the Nightmare of Zakhak painting, among the 8 colors in Max Loescher's theory, 6 colors (blue, green, red, yellow, purple, and black) are used in the women's clothes in «Tahmasp Shahnameh» while this number is also true for the Birth of Zal painting, with the difference that black color is not used in this painting and brown color is not used in the

Nightmare of Zakhak painting. The gray color is not visible in any of the paintings. It should be noted that in terms of the multiplicity of colors, cold colors (blue and green) predominate over warm colors (red and yellow) in the researched paintings. To express color, the Safavid artist has used color balance in the drawing of women's clothes in the paintings of the Nightmare of Zakhak and the Birth of Zal in «Tahmasp Shahnameh» based on Max Loescher's theory of color psychology; Because women's clothes have main and secondary colors available according to the current theory, and in some people, the presence of the main or secondary color is more. In order to see these colors better, the artist has placed the women in the upper part of the painting and in the blue background, which represents peace. Meanwhile, in the Birth of Zal painting, according to the color of the whole picture, mostly warm colors (red and yellow) can be seen, and like the previous painting, in this picture, the use of color in women's clothes with balance is evident.

The relationship between the color of women's clothes and their status

In the Safavid era, unlike its previous period, we see a wide presence of women in paintings. This means that the position of women in this period of Iran's history had a high social status. In the paintings, it can be seen that women are present in various positions. During the Safavid period, the type of women's clothing and the decorations used in it were a sign of social rank and its appearance can be seen in the paintings. The illustrated roles of women in the paintings of this period mostly include maids, princes, lovers, and dancers (Mohebi et al., 2018). The clothes of kings are often shown in warm colors such as red and gold, and this can express power, pride, and glory. Yellow and green colors are mostly used for women's clothes; it can be said that these colors inspire purity and beautiful nature, and the painter used the studied paintings to express these qualities in women's clothes. In the above paintings, the state of being surprised by the event can be seen in the faces and hands of most of the human figures. In general, it can be said that the Safavid artist relied on colorism, color composition, and knowledge of expressing the psychological meaning of colors to paint women's clothes because by considering the main and secondary colors in the space of the researched paintings, the place of women has been considered for more emphasis concerning official textiles such as the crown.

Discussion

In the current research, after studying the colors of selected women's clothes from «Tahmasp Shahnameh», and according to Max Loescher's theory of color psychology, the following results were obtained:

Table 13. Frequency of colors in the Nightmare of Zakhak painting. Source: Authors.

Color Code	1	2	3	4	5	6	7
Frequency	7	6	3	5	3	-	1
Percentage%	%٢٨	%٢٤	%١٢	%٢٠	%١٢	-	%٤

Table 14. Frequency of colors in the Birth of Zal painting. Source: Authors.

Color Code	1	2	3	4	5	6	7
Frequency	14	13	13	8	2	2	-
Percentage%	%٢٧	%٢٥	%٢٥	%١٥	%٤	%٤	-

Table 15. Frequency of cold colors (blue-green) to warm colors (red-yellow) in paintings. Source: Authors.

Color Code	Painting	1	2	3	4
Frequency	Nightmare of Zakhak	7	6	3	5
	Birth of Zal	14	13	13	8
Percentage %		%۳۷	%۳۳	%۲۸	%۲

According to Tables 13 to 15 frequency percentage and the use of color in the clothes of selected women of Tahmasp Shahnameh, it can be stated that: The frequency of cold colors (blue, green) is higher than warm colors (red, yellow). In other words, the artist of the Safavid era was more influenced by cold colors than warm colors in drawing the color of women's clothes in the mentioned Shahnameh. He also used the relationship of color balance between cold and warm colors; it means that he borrowed from the cold and warm color group to color women's clothes.

Conclusion

In Iranian paintings of the Safavid period, there is a lot of color diversity in women's clothes, which shows the talent of intelligence, knowledge of colors, and the interest of the artists of this period towards the element of color. Based on Max Loescher's color psychology, it was found that the use of color balance relationship is evident in women's clothing in «Tahmasp Shahnameh» regardless of the multiplicity of colors in the paintings under research and the use of cold colors (blue, green) is more than warm colors (red, yellow) in terms of the multiplicity of colors. The artist of this period has tried to create a balance by considering the psychological properties of warm and cold colors, while the artist has consciously drawn the pictures of this Shahnameh, taking into account the subject of the paintings and the color composition, and knowing the color concept of women's clothes. In the Nightmare of Zakhak painting, the color blue, which shows peace, is used against the surprised state of the audience and the interior of the upper part of the mansion. In the Birth of Zal painting, the artist emphasizes yellow in women's clothes, and due to the golden sky and the dominant color of the painting, it inspires excitement in the audience. In the above paintings, gray color, which is a neutral color, is not used for women's clothes. The artist has used textiles to express the position of women in the paintings under study.

Suggestions for Further Study

Interdisciplinary research plays a useful role in understanding the personal style of artists and poets and the like. Considering suggestions, other researchers can evaluate the similarities and differences in the personal style of the person or people in question by using this type of research. In the field of art and literature, where there is a close relationship between the two, from the point of view of color psychology and different types of psychology, such as Gestalt psychology, paintings such as «Golestan» and «Boostan» by Saadi, as well as the great "Ilkhanid" Shahnameh can be studied from a visual point of view. The analysis was done to express the psychological dimensions of these works from new perspectives.

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