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

The Effect of *Khadab* on Beauty, Health, and Hair Strengthening, as Mentioned in Persian Medicine, based on Hakim Seyyed Isma'il Jurjani's Outlook

Abstract

As a comprehensive and dynamic school, traditional Persian medicine is a collection of theoretical and practical sciences that Iranian scholars have used in different centuries to prevent and treat diseases and maintain health. Persian medical books refer to the benefits of *Khadab* and its preventive and therapeutic recommendations. One of the leading physicians is the Hakim Seyyed Isma'il Jurjani, who has discussed the effective combination of products in making *Khadab* and talks about the effects of *Khadab* on the beauty, health and strong hair. The use of *Khadab* is an ancient form of treatment in Iran. In fact, the employment of *Khadab* is a perfectly natural process used to improve skin and hair health and heal ailments. This study examines the prescriptions and combinations related to the types of *Khadab* and Hakim Seyyed Isma'il Jurjani's recommendation on *Khadab* in Persian medicine. According to Hakim Jurjani, *Khadabs* are classified into several categories: those that turn hair into black, those that turn hair into red, tan or gold, and those that whiten hair.

Key words: *Khadab*, Health, Beauty, Hair Strength, Traditional Medicine, Persian Medicine, Seyyed Isma'il Jurjani

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Introduction

The desire for beauty has conditioned individuals to constantly look after their hair since hair is one of the criteria for appreciating a person's facial attractiveness. As a result, historically speaking, hairdressing equipment and manuscripts, including herbal and mineral hair tonic component, are several thousand years old. Hair health, care and aesthetic methods, and *Khadab* kinds have all been covered in Persian and Islamic medicinal writings. (Hosseini Karnami, et al, 2020, p. 47; Golshani, Hossein-Hashemi, and Zarshenas, 2022, p. 243)

Persian medical researchers' perspectives are replete with patterns and prescriptions for producing and utilizing *Khadab* and blackening hair. One of these physicians is Hakim Jurjani (Golshani, and Hossein Hashemi, 2021, p. 78). In this research, we evaluated Hakim Jurjani's ideas and advice on *Khadab*'s effects on health, beauty and hair strengthening.

There have been several treatises published regarding *Khadab*, including Mirza Najmuddin Tehrani's work "*Khadab from the Shiite and Sunni Point of View*", the sources of all narrations linked to the title of the book and the title of the chapter are listed. Sheikh Mohammad Hossein Ghomshei Najafi (d. 1918) also wrote a book on this subject. The book is entitled "*Comprehensive Khadab*" (Agha Bozorg Tehrani, 1976, p. 176; Golshani, Hossein-Hashemi, and Zarshenas, 2022, pp. 243-244). Among Sunnis, Ali ibn Muhammad Sa'id al-(d. Suwaidi's 1819) "*Khadab treatise*" (Al-Zirikli, 1980, p. 17), and Sayyed Nur al-Din Wa'iz al- Baghdadi's work "The beautifying of the beard with *Khadab*" (Ismail Pasha Baghdadi, 1951, p. 461), is worth noting. Throughout traditional medical books, eminent physicians, such as Avicenna, Zakariya al-Razi, Abu Rayhan al-Biruni, Hakim Momen, and Aghili Khorasani have explored the medical issues associated with *Khadab* in detail, which are very thought-provoking. Another significant work is Seyyed Alireza Golshani et al's "*Study of the Effect of Khadab on Beauty, Health, and hair Strengthening from the Perspective of History and Traditional Medicine*". The book examines the history of *Khadab*, the perspectives of Persian traditional medicine on *Khadab*. The book gives some examples of making traditional medicine in which *Khadab* is used. It also introduces numerous plants employed by scholars. The significance of this book is in exploring the role of *Khadab* and hair coloring throughout Islamic civilization's history and how to employ therapeutic herbs. Taking Hakim Jurjani's viewpoint, this study explores *Khadab* and herbal remedies employed in it, as well as the combined prescriptions for hair strengthening, beauty, hygiene and hair loss.

The Use of *Khadab* Throughout History

As shown by several narratives, such as that given by certain divine prophets like Moses, people seem to have been acquainted with using *Khadab* from ancient times, although they seldom utilized it. (Ibn al-Athir al-Jazari, 1965, p. 185) Achaemenid soldiers with yellow and blue hair are seen on the painted walls of ancient Iran's Apadana Castle Shush, the majority of which are currently held in Paris's Louvre Museum, demonstrating the Persians' tradition of using *Khadab*. (Mohagheghzadeh, Zargarán, and Daneshamuz, 2011, p. 21) The *Bundahishn* lists a variety of traditional Persian hair colors, including Indigo, Rubia tinctorum, Turmeric, Saffron, Henna, and Draperian (Logwood). (Mohagheghzadeh, Zargarán, and Daneshamuz, 2011, p. 21) (Figure 1-2) Hairdressing



and hair dyeing were quite popular in ancient Iran. The ancient Persians were particularly fond of black hair, seeing blonde hair as a sign of racial degeneration. In case of minor hair color changes, they would dye it using Henna, Woad, Indigo, and Rubia tinctorum. (Golshani, and Hossein Hashemi, 2021, p. 19)



Figure 1. Detail from a frieze depicting Elamite archer. From the Achaemenid palace of Darius I at Susa, Iran 510 BC. (http://www.egyptsearch.com/forums/ultimatebb.cgi?ubb=print_topic:f=15;t=012924)



Figure 2. Women with *Khadab* hair color in Achaemenid court (imaginary illustration) (Golshani, and Hossein Hashemi, 2021, p. 19).



One of the most important Silk Road goods that China bought from Iran during the Sasanid period was the famous Persian Indigo, which was high-priced, and the Queen of China purchased a quantity for her consumption every year. (Christensen, 1989, p. 191)

In the Qur'an and other Islamic texts, beauty and adornment have been mentioned many times, and with reference to the beauty of God and that he loves beauty and adornment, it has been recommended to beautify the people of society. "O Children of Adam! Put on your adornment on every occasion of prayer, and eat and drink, but do not waste; indeed, He does not like the wasteful" (Quran, 2009, Surah: 7, Al-A'raf, Verse 31). As this verse shows, "God loves beauty and does not love ugliness". Ibn Manzur has said in the definition of the chapter of adornment "bab e zinat": "Adornment is anything which makes one beautiful." (Ibn Manzur, 1994, p. 202) Therefore, any action that makes the body more beautiful is considered an ornament. In the sources of Iranian medicine, hair care and *Khadab* have been ordered for beautification. The sources of Iranian medicine look at *Khadab* from a unique point of view, and it can be said that it pays attention to a kind of ornament of the human body. (Golshani, Hossein-Hashemi, and Zarshenas, 2022, p. 243)

According to sources, Persians have blackened their beard by *Khadab* once a week since they have always liked black hair and beards. Women were also known to use *Khadab* (as a verb, meaning dyeing with *Khadab*) to dye their hair, hands, and feet (Ravandi, 2003, Vol 7, p. 108). Religious officials or clerics were among those who encouraged this practice, believing that a real Muslim shaved his hair and whiskers, but not his beard, and dyed it by *Khadab* weekly; those who refused to do so were suspicious by religion leaders and authorities. (Ravandi, 2003, Vol 3, p. 520)

On the other hand, Mohtaseban were among those who prohibited individuals from coloring their white beards, particularly with black *Khadab*, unless it was for jihad (war) in the path of God. They also penalized women who used *Khadab* for their hair, but Henna and Katam coloring were not prohibited. (Mawardi al-Basri, 1989, pp. 338-339)

Hakim Isma'il Jurjani's viewpoint on *Khadab*

As the hometown of Seyyed Isma'il Jurjani (1042-1137), a Persian physician and pharmacist, was covered by medical herbs and traditional medicine of Kharazm region, he delineates several types of *Khadab* in his book *Zakhireye Khwarazmshahi*. (Golshani, and Esmaili, 2021, p. 138) Jurjani in *Zakhireye Khwarazmshahi* cites Henna and Indigo as two significant types of *Khadabs*, stating: "Indigo or katam is a plant that, combined with Henna, is used to dye the hair, making the color constant, and if its root is boiled in water, pen ink is obtained." The *Khadabs* are used as follows: first, thoroughly mix the Henna and wait an hour or more; the longer you wait, the better; secondly, combine Indigo with Henna; some people simply use Indigo alone, which results in Peacock color. Some mix Henna and Indigo and soak it in sumac and pomegranate juice, while others combine it with a bit of Black Kashk and add it to walnut skin extract. Still, others boil lime and lead-ink in water or put it out in the sun, and then add wool to turn it black. Thus, Indigo and Henna are steeped in the mixture, and 0.6 grams of crushed cloves are added to create Khazab; this combination results in darker hair (Jurjani, 2012, p. 166). Jurjani often categorizes *Khadab* as blackening, reddening, or bleaching (Jurjani, 2012, p. 169). (Figure 3).





Figure 3. Imaginary drawing in a glazed dish of hats and black dyed *Khadab* hair of women in the Seljuk and Khwarezmshahian periods. Kashan 13th century AD. The Cincinnati Art Museum is an art museum in the Eden Park neighborhood of Cincinnati, Ohio, USA. (Gheibi, 2006, p. 365)

Hakim Jurjani believes that along with the benefits of *Khadab*, it may also be harmful from a traditional medicine perspective. Most *Khadabs* cause the brain to become cold and feeble, allowing discharge from the skull to enter the throat and mouth, resulting in a stroke. It is thus preferable to mix *Khadab* with warm-natured substances like musk and cloves or employ these materials after dyeing. Also, *Khadab* often straightens curly hair. *Khadabs* also intensify hair color; thus, they should be coupled with substances that dilute hair color. Another disadvantage of *Khadab* is that it dries, breaks and damages hair; therefore, after dyeing, Violet and Chamomile oils should be applied, which will create a black cover on the hair. This darkness should be removed using pea and broad bean flour, and its negative effects lessens by spreading warm oil on the hair (Jurjani, 2012, p. 169; Gorji, et al, 2018, pp. 128-129; Hosseini Karnami, et al, 2020, p. 53). Occasionally, dyed hair becomes bicolour, stained and faded; in this case, a small amount of the composition should be gently rubbed on the stained spots. Aromatic oil soot, such as Moringa, Nasturtium oil, or wax soot, may also be applied to the hair (Avicenna, 1988, p. 141).

Hakim Jurjani quotes Avicenna saying that most oils marketed as hair dyes are counterfeit and any treatment containing fat would be ineffective on the hair. Fat provides a barrier between the drug's effect and the hair, preventing the medicine from reaching the hair, making it ineffective; however, sometimes the medicine is potent and hence highly effective, and despite its oily nature, it still impacts the hair (Jurjani, 2012, p. 169) (Table 1).



Table 1: The most important medicinal plants used *Khadab* hair

plant	property
Isatis tinctoria, also called woad, dyer's woad, or glastum (In Persian Vasmeh or Katm)	Vasmeh or Katm is a plant that is mixed with Henna for dyeing hair, and its color remains constant, and if its root is boiled in water, the pen ink is obtained. (Jurjani, 2012, p. 166).
Lawsonia inermis, also known as hina, the Henna tree	Dark Henna plants are in different types of herbs, shrubs or trees, including 500 species in 20 to 30 genera. Some of these species grow in very humid areas or in the tropics, and some, especially in the warmer parts of Latin America. This plant is also grown in southern and warm regions in Iran (Azadbakht, 1999, p. 206). Henna is a plant with a famous leaf that is used for dyeing hair. Henna means doing <i>khadab</i> with it and taking Henna and rubbing Henna. It is a plant that is cultivated and grows like giant trees. Its leaves and branches are white, like pomegranate leaves and branches. The <i>Khadab</i> is taken from its leaves. Henna is cultivated in Bam, Bahramabad and some parts of southern Iran and taken to Kerman and Yazd and ground in special mills. It is a plant from the genus of petioles that forms a specific genus called Henna. This plant is a shrub that is cultivated in North and East Africa, Saudi Arabia and Iran (Dehkhoda, 1998, pp. 9213-9214).

Examples of combinatorial *Khadab*'s products by Hakim Isma'il Jurjani

1- *Khadabs* that redden hair

Version 1 (Table 2):

Table 2: Red color for *Khadab* hair

Row	Components	Amount
1	Sumac	<i>Enough</i>
2	Oak apple (Mazoo)	<i>Enough</i>
3	Helianthus annuus	<i>Enough</i>
4	Venus hair fern	<i>Two bunches</i>
5	Common wormwood	<i>One bunch</i>
6	Peeled Lupinus	<i>Enough</i>

Preparation method

Mix Sumac, Oak apple, and Helianthus annuus in sufficient quantities, Venus hair fern in two bunches, Common wormwood in one bunch, and Dry Lupinus in sufficient quantities, and soak the mixture in ten rotls of water. A few days later, dye hair with this compound which turns the hair to reddish-yellow.

The feature of red and reddish-yellow *Khadabs* is that they open the reed skin. People used to heat it until the dampness evaporates and the reed skin dries; then, they massaged the hair until it became golden. Iron rust and alum water are applied to the head the same way as Henna and left for four hours before being washed off. Then, Henna is boiled and applied to the head, making the hair golden. The crystal alum is mixed with mignonette and saffron, turning hair to gold color. Mix ten mithqals of ground Lupinus, five mithqals of Myrrh, three mithqals of iron nitrate, dried wine sediment, ashes of grape wood, and the water in which grape wood is soaked and put the mixture on the hair (Jurjani, 2012, p. 169).



2- *Khadab* that bleaches hair

Prescription No. 2 (Table 3):

Table 3: White color for *Khadab* hair, method 1

Row	Components	Amount
1	Dry elecampane	<i>Enough</i>
2	Radish peel	<i>Enough</i>
3	Alum	<i>Enough</i>
4	Resin	<i>Enough</i>
5	Jonquil	<i>Enough</i>
6	Poppy peel	<i>Enough</i>
7	Camphor	<i>Enough</i>
8	Rosewater	<i>Enough</i>
9	Sulfur	<i>Enough</i>

Preparation method

Bleaching *Khadab*

Ground the dried elecampane, dried radish peel, alum, and resin. Then, add Jonquil and poppy peel. It is preferable to add camphor and rose water to the mixture. Tightly cover the wet hair with sulfur. It will become white quickly (Jurjani, 2012, p. 169).

Prescription No. 3 (Table 4):

Table 4: White color for *Khadab* hair, method 2

Row	Components	Amount
1	Rosa canina	<i>Enough</i>
2	Mung bean	<i>Enough</i>
3	Swallow dung	<i>Enough</i>
4	Garlic blossom	<i>Enough</i>
5	Radish peel	<i>Enough</i>
6	Cattle bile	<i>Enough</i>
7	Kavark blossom	<i>Enough</i>
8	Sulfur vapour	<i>Enough</i>
9	Vinegar	<i>Enough</i>

Bleaching *Khadabs*: Rosa canina, commonly known as the dog rose, mung bean, khataf dung [swallow], white garlic blossom, radish peel, cattle bile, kavark blossom, and sulfur vapour, in vinegar separately. This *Khadab* is used to bleach the hair (Jurjani, 2012, p. 169).



3- Khadabs that turn hair black

Prescription No. 4 (Table 5):

Table 5: Black color for Khadab hair, method 1

Row	Components	Amount
1	Indian gooseberry	50 deramsang (Unit of measurement; About six mithqal)
2	Myrtle juice	Enough
3	Hollyhocks	50 deramsang
4	Henna	50 deramsang
5	Indigo	50 deramsang
6	Oak apple	20 pieces
7	Resin	50 deramsang

Preparation method

Boil fifty deramsang Indian gooseberry and a sufficient amount of Myrtle juice. Then roast fifty deramsang Hollyhocks, fifty deramsang Henna, fifty deramsang Indigo, and twenty Oak apples, and beat ten deramsang Oak apples and fifty deramsang resin until they are soft. Then, combine these materials, heat them, and mix them with that water. Now it is ready to be applied to the hair. This mixture is beneficial for blackening hair (Jurjani, 2012, p. 168).

Some further variations of *Khadab* from Hakim Jurjani's point of view are:

Prescription No. 5 (Table 6):

Table 6: Black color for Khadab hair, method 2

Row	Components	Amount
1	Oak apple	Enough
2	Olive oil	Enough
3	Burnt zinc	10 deramsang
4	Alum	Two deramsang
5	Crystal sea salt	One deramsang

Preparation method

Non-Henna or Indigo-based *Khadab*: Mix olive oil and oak apple and place it in a pot to burn till it gets black. Mix twenty deramsang of oak apple, ten deramsang of burned zinc, two deramsang of alum, one deramsang of crystal sea salt, and this *Khadab* produces a long-lasting color (Jurjani, 2012, p. 168).

Prescription No. 6 (Table 7):



Table 7: Black color for Khadab hair, method 3

Row	Components	Amount
1	Burnt zinc	<i>Enough</i>
2	Alum	<i>Enough</i>
3	Baghdadian rotl	<i>Enough</i>
4	Tragacanth	<i>15 deramsang</i>
5	Salt	<i>Seven deramsang</i>

Preparation method

Combine baghdadian rotl, burned zinc, alum, and tragacanth, 15 deramsang each, salt seven deramsang, and then mix them in warm water and apply it to the hair for three hours and then rinse the hair. Some people combine these substances with Indigo, Henna, Mordaseng date, and kohl (Jurjani, 2012, p. 168).

Prescription No. 7 (Table 8):

Table 8: Black color for Khadab hair, method 4

Row	Components	Amount
1	Indigo	<i>Enough</i>
2	Henna	<i>Enough</i>
3	Mordaseng date	<i>Enough</i>
4	Burnt oak apple	<i>Enough</i>
5	Burnt zinc	<i>Enough</i>
6	Tragacanth	<i>Enough</i>
7	Sweet William	<i>Enough</i>

Preparation method

Combine the Indigo, Henna, and Mordaseng date, as well as the kohl, lime, burnt oak apple, burnt zinc, alum, tragacanth, and Sweet William in equal amount and color the hair for six hours. Put the beet greens on hair to prevent it from getting dry and then rinse it (Jurjani, 2012, p. 167).

Conclusion

Having reviewed Seyyed Isma'il Jurjani's book, *Zakhireye Khwarazmshahi*, we studied Indigo or Katam, Henna, and several plant chemicals. These herbal and natural ingredients are superior to the chemical compounds available for strengthening, repairing, and beautifying the hair. Indeed, this study may open the way for complementary medicine practitioners to join the market for non-toxic natural products. We assume that studies and research in classical pharmacy will present the scientific and cultural legacy of Persian Islamic civilization; in addition, the findings can serve as a foundation for future research into methodologies and production of therapeutic goods, promoting public health.

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Conflict of Interest

None.

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