



World Journal of Current Medical and Pharmaceutical Research

Content available at www.wjcmpr.com

ISSN: 2582-0222



HAMMAM THERAPY: INTEGRATING TRADITION AND EVIDENCE IN THERAPEUTIC PRACTICES

Irshad Ahmed Wani^{1*}, Bushra Husain², Rayees Ahmad Mir³, Mohd Nayab⁴, Mehmooda Begum⁵


¹PG Scholar, Dept. of Ilaj bit Tadbeer, National Institute of Unani Medicine, Bangalore

²PG Scholar, Dept. of Ilaj bit Tadbeer, National Institute of Unani Medicine, Bangalore

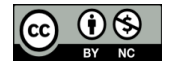
³PG Scholar, Dept. of Ilaj bit Tadbeer, National Institute of Unani Medicine, Bangalore

⁴Associate Professor, Dept. of Ilaj bit Tadbeer, National Institute of Unani Medicine, Bangalore

⁵Head, Dept. of Ilaj bit Tadbeer, Hakim Syed Zia-ul-Hasan Govt. Unani Medical College, Bhopal

Article History	Abstract
<p>Received on: 18-12-2024 Revised on: 12-01-2025 Accepted on: 05-02-2025</p>	<p>Ḥammām therapy, a traditional bathing practice with historical roots in Roman and Islamic cultures, is designed to provide both physical and therapeutic benefits through a sequence of hot, warm, and cool rooms. Fundamental to the Unani medical system, it uses a series of hot, warm, and cool exposures to enhance circulation, aid in detoxification, and treat skin and musculoskeletal disorders. The therapeutic mechanism of the Ḥammāmis based on principles of balancing bodily humors and restoring health through Tarteeb (regulating moisture) and Taskhīn (heat therapy). Although the practice offers numerous health benefits, its use requires careful consideration of individual temperaments and medical conditions. This review examines the historical evolution, architectural structure, procedural aspects, and types of Ḥammāmbaths, including their specific health benefits & modern clinical studies validating its efficacy in conditions like metabolic syndrome, cardiovascular disorders, and post-stroke rehabilitation, emphasizing its relevance in contemporary integrative medicine.</p> <p>Keywords: Ḥammāmtherapy, Unani medicine, detoxification, heat therapy, holistic health.</p>
	

This article is licensed under a Creative Commons Attribution-Non-commercial 4.0 International License.
Copyright © 2025 Author(s) retains the copyright of this article.



*Corresponding Author

Irshad Ahmed Wani

DOI: <https://doi.org/10.37022/wjcmpr.v7i1.349>

Introduction

The word Ḥammām is derived from the Arabic term "Hamm," meaning "warmer" or "steam bath room." In French, it is referred to as "Bain maure" [1]. According to Ibn Sina, the term Ḥammām comes from "Alhamim," which signifies the extreme heat of summer. In various Arabic dialects, Ḥammām is used to refer to bathrooms or toilets. In the Unani system of medicine, Ḥammām specifically refers to a hot bath, which is intended not only for cleansing the body but also for providing therapeutic benefits to the skin and various organs, as well as preventing humoral diseases. It helps eliminate excess or waste matter from the body through sweat and vapor. Ḥammāmaids in reducing excess and enhances the body's ability to absorb nutrients, thereby promoting overall health [2]. Hippocrates believed that illness resulted from imbalanced body fluids. To treat this, he recommended lifestyle changes, including bathing, exercise, and massage. He also wrote about the healing properties of hot and cold water in his influential work, "Airs, Waters and Places" [3]. According to the logic and philosophy

of Unani medicine, the fundamental concept of Ḥammam is the body's Tarteeb and Taskhīn. It produces Ruṭūbat (Wetness), Yabūsat (Dryness), Burūdat (Coldness), and Ḥarārat (Hotness). As Muḥallil Fuḍlāt, it checks for loose motion. Nuḍj is produced in morbid matters and aids in their removal from the body [1]. Ḥammām, similar to Riyazat and Dalk, falls under the category of Asbab-e-GhairDaruriya, meaning they are not essential for life's survival. However, when practiced, they help maintain health if the body is healthy and can restore it when the body is ill or diseased [4].

Historical Background

Bathing practices date back to ancient times, long before the development of organized medicine. Water was used for therapeutic purposes in the Asclepieia, which were healing temples dedicated to Asclepius, the God of Medicine. These Asclepiens were typically situated near rivers or springs and functioned as healthcare facilities, similar to modern clinics and hospitals, with the priests of Asclepius serving as the healers or physicians. The Asclepieia in Epidaurus and Kos were among the most renowned. In ancient times, baths were regarded as sacred and were thought to provide strength and physical rejuvenation for those who bathed⁵. The concept of the Ḥammām originates from the hot bathhouses that were common in the Roman Empire, such as the Ḥammām of

Antaqia and Deokalesian located in Tadmur. In fact, alongside the agora, the baths were one of the most popular civic institutions in ancient Rome. This tradition spread from Rome to various regions across the empire, including Asia Minor. The steam bathhouses originated in Central Asia, where people gathered not only to bathe but also to relax, socialize, and sometimes participate in rituals. In Islamic history, these bathhouses were known as Ḥammām. Although the tradition of the Ḥammām is most commonly associated with the Ottoman period, the construction of Ḥammāms dates back to the early days of the Arab Empire, during the Umayyad dynasty (661-750 CE). After the Arab conquests of Alexandria, the Arabs began building their own versions of the Greek-Roman baths. The first Ḥammām in Syria, Ḥammām Qusair-e-Amra, was constructed during the Umayyad period, while Ḥammām-e-Qasrul Hayer Gharbi was built in Damascus during the reign of Hasham Bin Abdul Malik (723-744 AD) [6,7].

Ḥammām in India

The Ḥammām, or Turkish bath, has a long and colorful history in India, introduced during the medieval era. During the Delhi Sultanate and Mughal Empire, Ḥammāms became an essential feature of royal residences, public buildings, and mosques. Evidence of these bathhouses can still be found in various locations across India, including Kashmir, Delhi, Mumbai, and Bhopal. Bhopal is home to the traditional Turkish bath known as Ḥammām-e-Kadami, which dates back to the era of the Nawabs. Built in the style of the Cemberlitas Ḥammām in Istanbul, it was constructed in the early 18th century by Dost Mohammad Khan. This remains the only functioning Ḥammām in the entire Indian subcontinent [1].

The Unani text *Al Qanoon* by Ibn Sina, written around 1000 BC, mentions that a proper Ḥammām treatment can rejuvenate a person, making them feel as refreshed as a newborn. Emperor Augustus was treated for typhoid fever by the Greek physician Antonius Musa, who used cold baths as part of the treatment [9].

Rooms of Ḥammām

A typical Ḥammām is made up of three interconnected main rooms: the cool room or relax room, the warm room which is the intermediate room and the hot room. The Ḥammām is a specialized type of medicated bath, requiring specific architectural design for its construction.

The temperament of the Ḥammām rooms is as follows [10, 11].

1. First Room of Ḥammām [Al Qism al-Barid]: This room is cool and wet, with a temperature ranging between 22-28°C, offering a cold and moist environment (Sard Tar or Barid Ratab).

2. Second Room of Ḥammām [Al Qism al-Haar al-Wasti]: This room features a warm and wet atmosphere, with an intermittent temperature range of 28-35°C, creating a hot and moist environment (Garm Tar or Har Ratab).

3. Third Room of Ḥammām [Al Qism al-Haar or Bait al-Naar]: This room has a hot and dry atmosphere, with temperatures around 20-25°C at floor level and 40-50°C at head level, offering a hot and dry experience (Garm Khushk or Har Yabis).

Another room, which is separate from the main Ḥammām rooms and designated for changing clothes, has a Moatadil temperament.

Procedure of Ḥammām

There is a specific sequence to follow when using the Ḥammām. The bather should begin by entering the first room, then gradually move to the second and third rooms, spending an adequate amount of time in each to allow the body to adjust to the room's temperature. It is important not to stay too long in the third room, as prolonged exposure can affect the balance of the bilious humor [12].

Taking a Ḥammām after eating can aid in weight gain because the heat stimulates the absorption of food. However, if Ḥammām is taken right after a meal, it can cause obstruction (Sudda) by promoting the absorption of food (Ghiza) that hasn't been fully digested. A person who takes a Ḥammām on a full stomach may develop obstruction (Sudda) in the liver or kidney stones. However, if Ḥammām is taken on an empty stomach, before eating, it helps in weight reduction and also leads to dryness of the body [13].

If the proper procedure for bathing is not followed, it can have harmful effects, such as weakening the heart and nerves, causing nausea and vomiting, dispersing harmful substances to weaker organs, and potentially leading to sexual debility [14]. Hippocrates explained that very cold water can result in serious intestinal disorders, whereas water that is too hot or stagnant often leads to fever.

Mechanism of Action of Ḥammām

The proposed mechanism behind the action of the Ḥammām is attributed to its qualities of Tahleel, Taqtee, and Talteef. Tahleel is achieved through the removal of waste and harmful substances from the body, facilitated by the heat in the Ḥammām. Taqtee refers to the process in which hot water helps release the morbid matter trapped in the interstitial spaces of the organs. Talteef is the property that allows warm water to interact with the body's natural faculties (Quwwat-e-tabiya), breaking down the harmful matter into smaller components [8, 15, 16].

The renowned Unani scholar Majoosi, in his work *Kamil us Sa'anah* (Liber Regius), explained that a light oil massage in the Ḥammām aids in resolving morbid matter and promotes relaxation of the organs. Conversely, a vigorous massage without oil helps in dissolving the morbid matter while also causing the body to become firmer [17].

Characteristics of an Ideal Ḥammām [2]

1. The Ḥammām should be of historical design.
2. The Ḥammām should be roomy.
3. The water should be soft or have a fresh taste.
4. There should be a proper mechanism for temperature regulation.

In earlier times, every Ḥammām was equipped with specific facilities and operated by a team of workers to ensure its proper functioning and maintenance. These included [11]:

- **The heating area** (Bait-al-Nar)
- **The heating equipment** (Aala-e-taulid-al-Hararat)
- **The steam production and distribution system** (Khazan-wa-aala-e-taulid al-bukhār)
- **Cold water storage** (Khazanal-Ma-al-Barid)
- **Hot water storage** (Khazan al-Mā al-sakhin)

- **Extra water storage** (Khazan al-Mä al-ahtiyati)
- **Marble seating for bathing** (Mastaba)
- **Small bathing tanks** (Mughtas)
- **Furnace operator** (Daqqad or Sakhkhan)
- **Furnace storekeeper** (Dubbal or Ghabbar)
- **Clothing change room supervisor** (Sahib al-sandüq or Moallim or Maalik)
- **Cupping or Hijama specialist** (Mohajjam)
- **Massage therapist** (Taiyyab or Kayyas)

Types of Hammām [18-23]

1. Hammām Barid (Cold bath): The temperature of “cold water” is generally used at 65°F to 75°F. It is beneficial for people with a hot (Har) temperament. It promotes the inward movement of Hararat-e-ghariziyah, enhancing digestive capacity. It also strengthens the nerves and the heart, and is effective in lowering body temperature, especially during hyperpyrexia.

2. Hammām Har (Hot bath): The water used in this type of Hammām ranges from 95°F to 110°F. It helps soften the skin, open the pores, and induce sweating. This is beneficial for conditions such as osteoarthritis, amenorrhea, renal pain, and obesity.

3. Hammām-e-bukhari (vapor bath): In this type of Hammām, steam is applied to the entire body. It opens the skin pores, increases sweating, and aids in detoxifying the body. This treatment is commonly used to alleviate pain, particularly of musculoskeletal origin. It also helps in weight reduction and strengthens the nerves.

4. Hammām-e-Ramli (sand bath): In this type of bath, some parts of the body are either submerged in sand or sometimes covered with sea sand. Due to the absorbent nature of sea sand, it is effective in treating ascites.

5. Hammām-e-Bahri (Sea bath): In this type of Hammām, seawater is utilized, which contains a variety of natural salts. These salts help to break down thick substances and enhance the strength and vitality of the skin, making it effective for treating skin disorders.

6. Hammām-e-Shamsi (Sun bath): In this type of Hammām, the body is exposed to direct sunlight. Sunlight is a natural source of vitamin D3, which aids in calcium absorption and strengthens the bones. It is typically recommended to spend 15-30 minutes in direct morning sunlight.

7. Hammām-e-labni (milk bath): In this type of Hammām, either milk alone or a mixture of milk and water is used for cosmetic purposes. It helps soften the skin and enhance its complexion. The natural lactic acid in milk acts as an alpha-hydroxy acid, exfoliating dead skin cells to reveal fresh, youthful skin. Additionally, vitamin E and zinc in milk help slow the aging process and maintain the skin's natural elasticity.

8. Hammām-e-Saboosi (Bran bath): In this type of Hammām, approximately one kilogram of wheat flour (Atta) is filtered, and the resulting byproduct, known as roughage (Bhoonsi or Phoonk), is combined with about ten litres of water. The mixture is then boiled until half of the water remains. Depending on the use, this water is mixed and applied in the Hammām. It helps to smooth and soften the skin while providing relief from skin conditions such as itching, eczema, psoriasis, and sunburn.

9. Hammām-e-Hamiz (Acid bath)

In this type of Hammām, an acid or salt is added to the water. It is helpful in treating dyspepsia and liver diseases.

10. Hammām-e-kibriyati (gandhak) (Sulphur bath)

In this type of Hammām, water enriched with sulphur (Ma'aKibriti) is used. The sulfur's properties make this Hammām act as both a dissolving agent (Mohallil) and a soothing agent (Mulattif). It is beneficial for conditions such as Irqe Madani, Falij, and Rasha, and helps reduce severe pain. It is also effective for treating chronic ulcers, Kalf, Bahaq, and Bars, and is recommended for relieving uterine rigidity.

11. Hammām-e-Hadidi (Ferrous oxide bath)

In this type of Hammām, water rich in ferrous oxide (Ma'aHadidi) is used. It is recommended for treating Amraz-e-BaridahwaRatbah, kidney issues, and is also beneficial for digestive and spleen-related problems.

12. HammāmShibiah-wa-Zajiah (Alum bath)

In this type of Hammām, water enriched with alum (Ma'aShibiahwaZajiah) is used. It is effective in treating conditions such as nosebleeds, edema, and bleeding from the rectum or vagina.

13. Hammām-e-Nuhasi (Copper bath): When copper is mixed with water in this Hammām, it is referred to as HammāmMa'aNuhasi. It is recommended for Amraz-e-BaridahwaRatbah, such as joint pain (WajaulMafasil), gout (Niqras), muscle weakness (Istirkha), swelling (Ribu), hemorrhoids (Damamil), abscesses (Busur), and kidney disorders.

14. HammāmBoriqi (Borax bath)

In this type of Hammām, saline water (Ma'aBoriqi) is used. Its anti-inflammatory properties make it helpful for treating osteoarthritis and gout. Additionally, it possesses antifungal qualities.

15. Hammām e wahli (Mud bath)

In this type of Hammām, the body is either immersed in mud or the mud is applied to the skin. It absorbs toxins from the body, making it highly effective in preventing various diseases. Additionally, it has healing properties, improves blood circulation, and is beneficial for skin conditions such as psoriasis and rosacea.

16. Hammām-e-qadmi or Pashoya (Foot bath)

In this type of Hammām, the feet are immersed in water, sometimes plain water or, at other times, water mixed with herbs after decoction. This treatment is beneficial for conditions such as meningitis, epilepsy, high fever, pain relief (Taskeen e dard), deep vein thrombosis, and leg swelling.

17. Hammām- e-nisfi or Aab-e-zan (Sitz bath or Hip bath)

In this type of Hammām, the patient sits in water, which is mixed with medicinal herbs, up to the hip level, usually in a bath tub. The water can be a medicinal decoction (Joshanda) or Khesanda, or sometimes just cold or hot water. This method is effective for treating conditions such as hemorrhoids, anal fissures, post-rectal surgery care, episiotomy recovery, uterine cramps, benign prostatic hyperplasia (BPH), vaginal infections, and urinary tract infections.

Other Similar Therapies

Sauna Therapy

A sauna is a room typically heated to temperatures ranging from 70°C to 100°C (158°F to 212°F). The heat is usually dry, with a humidity level between 10% and 20%. When using a sauna, the skin temperature can rise to about 40°C (104°F). As a person sits in the sauna, their heart rate increases, and blood vessels dilate, which improves circulation. The heat also induces heavy sweating.

There are different types of saunas based on their heating methods, including wood-burning saunas, electrically heated saunas, and steam room saunas [24].

A Turkish Bath

The Turkish Hammām is a therapeutic steam treatment that has remarkable benefits for both the body and mind. Typically, the experience begins with a 15-minute session in a steam-filled, heated room (Calidarium), followed by a few minutes in a warm room (Tepidarium) to help the body gradually adjust. This is then followed by a brief immersion in cold water (Frigidarium) to stimulate and tone the body. The cycle can be repeated, or one can proceed directly to the relaxation phase, which includes a soothing massage with essential oils to promote relaxation and rejuvenation²⁵.

Turkish bath Or Sauna? [26]

Sometimes we get confused, Although these two therapies are completely different, they share significant similarities, particularly in the advantages they provide.

Similarities

Both help detoxify the skin through heavy perspiration, stimulate the lymphatic system to remove toxins and excess fats, and promote tissue regeneration, strengthening the skin. Additionally, they help regulate blood pressure by causing vasodilation and provide a beneficial effect on blood vessels, especially when cold showers are used after the sessions to help restore thermal balance.

Differences

- The differences lie in the environment: the sauna is usually a dry space fully constructed with wood, featuring benches for sitting or relaxing, while the Turkish bath is much wetter and is typically made of marble or stone.
- Saunas are designed to promote intense sweating and detoxification, whereas Turkish baths prioritize hydration and a more gentle, soothing heat.
- Also In the sauna, heat is produced by a stove, with temperatures ranging from about 50°C to 85°C. In contrast, the Turkish bath uses radiant heat, which is spread by steam across the benches, walls, and ceiling, then falls back toward the center of the space.
- Finally, while the sauna has very low humidity (typically around 10-15%) and the heat is intense and dry, the Turkish bath features much higher humidity (90-100%), creating a steam mist that causes temperatures to range from 20-25°C at floor level to 40-45°C at head level.

Swedana Karma

Swedana has been a key element of Ayurvedic healing for thousands of years. Its roots can be found in ancient texts like the Charaka Samhita, Sushruta Samhita, and AstangaSangraha, where it is outlined as an important part of Panchakarma, the holistic detoxification and rejuvenation therapy in Ayurveda. The ancient sages understood the significance of sweating for health and vitality, viewing it as crucial for removing toxins (ama) from the body and restoring the balance of the doshas (vata, pitta, and kapha) [27].

Applied Kulliyat of Hammām with respect to the present era

A Hammām can be defined as a technique in which the body is exposed to a hot and humid environment to promote health benefits⁶. Even after successful setup, it demands substantial effort and resources for ongoing maintenance. The benefits of a traditional hammām can be achieved by managing the temperature and humidity in a controlled room that maintains a set range of heat and moisture. A walk-in chamber functions as a testing area for large components and assemblies. There are different types of chambers, including panel walk-in chambers and solid walk-in chambers, which can be configured as either temperature chambers or temperature-humidity chambers. Panel walk-in chambers are made from lightweight, insulated panels, allowing for quick and easy installation, with welded walls that create a controlled environment for temperature and humidity applications. Solid walk-in chambers are generally more ideal for use in new construction projects due to their simpler installation process. These chambers can be used to create conditions and atmosphere of various hammām rooms within a single chamber²⁸.

Healing Effects of the Hammām [4, 29]

Effects of Hammāms on Muscle and Joint Pain: The hammām has therapeutic effects on muscle and joint pain. The heat within the hammām aids in relaxing muscles and enhancing blood circulation, which helps reduce pain in muscles and joints. Consequently, hammām therapy is often recommended for treating conditions such as fibromyalgia, osteoarthritis, rheumatoid arthritis, and other types of muscle and joint pain.

Effects of Hammām on Stress and Immune System Hammāms also have an impact on how the body responds to stress. The relaxation experienced in the hammām helps lower cortisol levels, which in turn reduces stress.

Elevated cortisol levels can weaken the immune system, so lowering them is beneficial for immune function. As stress decreases, the body's inflammatory response is reduced, which in turn positively impacts the immune system.

Respiratory system health

The hot and humid environment of the hammām helps to clear the respiratory passages and detoxify the lungs. This is especially beneficial for those with asthma and other breathing-related conditions.

Essential oils such as lavender, peppermint, tea tree oil, and eucalyptus are diffused in the hammām to enhance its therapeutic benefits. These oils have anti-inflammatory,

antiseptic, and decongestant properties that support overall respiratory health.

Effects of the Ḥammām on the Skin and Hair

One of the main health benefits of the ḥammām is the cleansing and revitalizing effect on the skin. The hot steam opens the skin's pores, aiding in the removal of toxins and impurities. This results in skin that appears brighter, smoother, and more youthful. ḥammām can also be therapeutic for individuals with chronic skin conditions, diseases like eczema, or issues such as acne. Sweating from the scalp helps eliminate accumulated debris in the hair follicles, encouraging fresh hair growth. It also opens the scalp's pores, clearing away any blockages that could inhibit hair growth.

The effects of the Ḥammām on Blood Circulation and Lymphatics

The ḥammām generally improves blood circulation and encourages peripheral vasodilation, making it particularly helpful for individuals with cold extremities and cellulite. Its therapeutic effect comes from its ability to open the skin's pores, facilitating the release of toxins.

Effects of the Ḥammām on renal system

Sweating facilitates the expulsion of toxins and uric acid, thereby enhancing kidney activity.

Contraindications of Ḥammām [14]

The ḥammām is contraindicated for -

- Individuals with a hot temperament, conditions like Tafarruq-e-itteṣal or Humma-e-Ufooni, where the body is unable to eliminate morbid matter.
- It should also be avoided by those with internal or external swelling (warm-e-batini or warm-e-zaheri),
- People suffering from diseases, such as cancer, or those with pus or open wounds for any reason should refrain from using the ḥammām.
- Moreover, it is advised not to visit the ḥammām after undergoing bloodletting (ḥasd).

Clinical Studies

1. Efficacy of Ḥammām-i-yābis (dry bath) in metabolic syndrome

a single arm, open-labelled clinical trial. Mohammad Zaki Ahmad, Abdul Nasir Ansari and Mohd Nayab [30].

Methods

This single-arm, open-label, pre- and post-study clinical trial involved 30 individuals (ages 20–50) diagnosed with metabolic syndrome. Participants underwent 10 sessions of dry heat exposure in Ḥammām-i-yābis for 15 minutes at 60°C, every third day for 30 days. Objective parameters such as blood pressure, waist circumference, FBS, HDL, and serum triglycerides were assessed before and after the treatment.

Results: After 30 days, significant reductions were observed in waist circumference, FBS, serum triglycerides, systolic and diastolic blood pressure, and an increase in HDL levels. No adverse effects were reported.

2. Efficacy of Hot and Dry Bath (Ḥammāmi-Har-Yabis) in Activities of Daily Living for Management of Post Stroke Hemiplegia by MOBASSIR ABBAS ,ABDUL NASIR ANSARI, MOHD NAYAB, UMAR AFZAL [31]

In this study, 30 patients with post-stroke hemiplegia received a hot dry bath treatment at 60°C for 15 minutes on every third

day for 30 days, totaling 10 sessions. The Barthel Index (BI), which measures Activities of Daily Living (ADL), was used to evaluate treatment efficacy. The Friedman test with Dunn's multiple comparisons was applied for analysis.

Results showed significant improvement in BI scores: from pre-treatment to the 15th day ($p < 0.01$), from the 15th to the 30th day ($p < 0.001$), and from pre-treatment to the 30th day ($p < 0.001$). The hot dry bath notably improved ADL in post-stroke hemiplegia patients, with fewer and milder side effects compared to conventional oral medications for post-stroke neuro-disabilities.

3. Effect of Steam Sauna Bath on Fasting Blood Glucose Level in Healthy Adults by Vandana V Shiralkar, Pratap E Jagtap, Gajanan J Belwalkar, Nitin S Nagane, Sushama P Dhonde [32]

In this study, 80 participants (40 males and 40 females, ages 30–50) underwent seven steam sauna sessions on alternate days, each lasting 15 minutes at 50°C. Fasting blood glucose levels (FBGL) were measured before the first session and after the seventh. Results showed a significant decrease in FBGL after the sauna sessions.

The steam sauna improved insulin sensitivity, a hormone that regulates glucose by promoting its uptake into muscle and fat tissues. Therefore, steam saunas may help prevent hyperglycemia and reduce the risk of diabetes mellitus.

4. Acute effects of sauna bathing on cardiovascular function by Tanjaniina Laukkanen , Setor K Kunutsor , Francesco Zaccardi , Earric Lee , Peter Willeit [33]

In an experimental study with 102 participants (average age: 51.9 years, 56% male) who had at least one cardiovascular risk factor, a single 30-minute sauna session at 73°C and 10–20% humidity was conducted. Cardiovascular and blood parameters were measured before, immediately after, and after a 30-minute recovery period.

Results showed a significant reduction in carotid-femoral pulse wave velocity (from 9.8 to 8.6 m/s), systolic blood pressure (from 137 to 130 mmHg), and diastolic blood pressure (from 82 to 75 mmHg), all with p -values < 0.0001 .

This study indicates that 30-minute sauna sessions improve arterial stiffness, blood pressure, and certain blood biomarkers.

5. Immediate Effect of Steam Bath Followed by Cold Shower on Body Temperature Among the Healthy Individuals: A Single Arm Study Dr. P. R. Asbin Birlle, Dr. Anusha, Dr. T. W. Sowmiya, Dr. Z. Edal Queen [34]

Fifteen medical students (ages 18–20) participated in a study where they underwent a 20-minute steam bath followed by a 5-minute cold shower. Body temperature was measured as the outcome. All participants completed the study, showing a statistically significant reduction in body temperature ($p = 0.001$), likely due to heat loss through sweat evaporation and the cold shower. Further research is needed to confirm these findings in other populations.

Discussion

The Ḥammām is a traditional therapeutic practice with deep historical roots, spanning from Roman and Byzantine cultures to Islamic civilizations, and later incorporated into various regions such as India and the Ottoman Empire. While it initially served as a social and cleansing activity, over time, the Ḥammām evolved into a medicinal practice integral to Unani medicine, specifically aiming to balance the body's humors and promote overall health.

The mechanism of action behind the Ḥammām involves its potential to detoxify the body, relieve joint and muscle pain, and improve circulation through controlled exposure to heat, humidity, and sweating. In addition to its physiological benefits, it has a significant psychological effect by aiding in relaxation and stress reduction, which can positively impact the immune system and mental well-being.

From a historical perspective, the Ḥammām played an essential role in health and wellness, particularly in societies influenced by Greek-Roman bathing traditions. The influence of this therapeutic practice can still be seen in various cultures today, especially in countries like Turkey, Morocco, and parts of the Middle East. In India, the influence of the Turkish Bath during the Mughal period is still evident in landmarks like the Ḥammām-e-Kadami in Bhopal.

The three-room structure of the Ḥammām, which involves progressively hotter rooms, provides an environment conducive to different therapeutic effects. The heat opens up the pores, enhances sweating, and promotes circulatory health. When used in a structured sequence, it allows the body to adjust to the temperature shifts, enhancing the detoxification process while minimizing risks associated with prolonged exposure to extreme heat.

Various types of Ḥammām therapies, such as the Sulphur Bath, Sea Bath, and Sand Bath, cater to specific health needs, from skin disorders to muscle pain and inflammation. Additionally, the swedana karma in Ayurvedic traditions shows similar principles of detoxification through sweating, highlighting the universal benefits of thermal therapies across different healing systems.

However, the Ḥammām is not without contraindications. It is contraindicated for individuals with certain health conditions such as hot temperament, swelling, cancer, and open wounds. These individuals are at risk for exacerbating their condition due to the heat and humidity of the Ḥammām. It is also advised not to use the Ḥammām immediately after bloodletting or during certain illnesses that involve fevers or infections.

Despite these risks, the Ḥammām's profound benefits on both physical and mental health make it an enduring tradition. It continues to be a valuable therapy today, especially in wellness centres and spas worldwide, providing relief from modern ailments such as stress, muscle tension, and poor circulation.

Conclusion

The Ḥammām is not merely a bath but a therapeutic ritual with profound health benefits, offering relief from both physical and psychological conditions. Its therapeutic principles, rooted in Unani medicine, continue to hold relevance in the modern era, where it can be adapted to contemporary wellness practices. The careful regulation of temperature, steam, and massage

therapy in the Ḥammām provides a holistic approach to detoxification, stress reduction, and muscle relaxation. However, individuals must exercise caution, especially those with specific health conditions, to avoid potential adverse effects. As societies continue to embrace ancient wellness practices, the Ḥammām stands as a timeless tool for health, offering a unique blend of relaxation, rejuvenation, and therapeutic healing.

Funding

No Funding Sources.

Acknowledgement

I owe a debt of gratitude to each and every author for their inspiration, guidance, and assistance in making this work possible.

Conflict of Interest

The authors have no conflicting financial interests.

Informed Consent and Ethical Statement

Not applicable.

Author Contribution

IAW and BH- conceptualized the study, conducted the literature search, and compiled relevant studies. RAM - synthesized the findings and contributed to manuscript drafting. All authors contributed to the review and editing of the manuscript and approved the final version.

References

1. Ansari MA. Application of Ḥammām (The Steam Bath), in the Past and Present; An Overview IJRAR March 2019, Volume 6,. DOI: 10.13140/RG.2.2.15555.25125
2. Tausif M, Ali H, Lari IA, Habib S. Ḥammām therapy: A systemic review. *International Journal of Unani and Integrative Medicine.* 2019;3(1):07-10.
3. Alam MK, Rahman A, Bashir T. A review on the Ḥammām: A regimen from Asclepians. *J Pharm Sci Innov.* 2020 Dec;9(6):167-170. doi: 10.7897/2277-4572.096191.
4. Mazhar SA, Anjum R, Anwar AI, Khan AA. Ḥammām Therapy: An Ancient Wisdom with Contemporary Relevance. *Journal of Integrated Community Health (ISSN 2319-9113).* 2020 Jul 15;9(1):25-30.
5. Osborn DK. The Greco-Roman Bath. *Greek Medicine.net.* Published 2007. Accessed September 18, 2020. 169 Md Khursid Alam Ansari et al: *J. Pharm. Sci. Innov.* 2020; 9(6) http://www.greekmedicine.net/hygiene/The_Greco_Roman_Bath.html
6. Allah. M. A., (YNM), Ilaj Bil TadbeerJadeedTehzeeqat Mufeed Tauzeehat, Composed At Karamat Computer Institute, Lucknow, U.P., Pp: 102-124.
7. Aslam, M., et al, (2015). A review on Ḥammām (Hot Bath): An antediluvian art of curing, *IHRJ*, Volume 3rd, issue-I, Jan-March 2015.
8. Sina, I., (2010), *Al-Qanoon-fit-Tibb*, (Urdu translation by Ghulam Hasnain Kantoori), New Delhi, Idarta Kitab-ul-Shifa, Pp: 121-122.

9. Yapijakis C. Hippocrates of Kos, the father of clinical medicine, and Asclepiades of Bithynia, the father of molecular medicine. In Vivo (Brooklyn). 2009;23(4):507-514.
10. Nafees Tarjumawa Sharae KulliyateNafeesi B. (Urdu Translation By M Kabeeruddin). New Delhi: IdaraeKitabus Shifa, 1954, 433-435.
11. Siddiqui MMH. Basic Fundamentals Regimen Therapy. 1st ed. New Delhi: Brown Book Publication Pvt. Ltd.; 2020. p. 235-38.
12. Aslam M, Ali SJ, Rahman A, Ahmad I. A Review on Hammām (Hot Bath): An Antediluvian Art of Curing. Int Hum Res J. 2015;3(1):1-8.
13. Tabri R, Firdausul Hikmat, IdaraeKitabus Shifa. 2010, 312
14. Sari ND. Bathe in Hammām and its effects on health as to Ottoman medical manuscripts in Turkish. 2018. p. 35-43.
15. Gazrooni, S., (1910), Kulliyat-e-Sadeedi, Urdu Translation by Husain. M. S. A, Matba Munshi Nawal Kishore, Pp: 140.
16. Kabiruddin. H., (1954), Kulliyat-e-Nafeesi, Idara Kitabus Shifa, New Delhi, Pp: 431-439.
17. Majusi. A. I. A., (2010), Kamil al Sanaa't, 1294 Vol. Urdu translation *by Ghulam Hasnain Kntoori, Idara Kitabus Shifa, New Delhi, Pp: 232-237.
18. Aslam M, Ali SJ, Rahman A, Ahmad I. A Review on Hammām (Hot Bath): An Antediluvian Art of Curing. Int Hum Res J. 2015;3(1):1-8.
19. Avicenna. The Canon Of Medicine Of Avicenna. (Gruner C, ed.). New York: AMS Press; 1930.
20. Hamdani HSMK. Buniyadiasool (Ilaj bit Tadbeer mutabiq tibbunani): Ejaz publishing house; 1st Ed, 2004, 31-33.
21. Maseehi Kitabus Miya I. Markazi council barae tahqeeq tibbunani; 1st Ed. 2008; 1:176-77.
22. Rahman HSZ. Tibbita qaddume: Muslim university Aligirh, 2000, 31-42.
23. Ahsanullah Ilaj Bit Tadbeer M. Qaumi council barae faroghurduzaban; 2nd ed. 2006, 111-118.
24. What are the benefits and risks of a sauna? Medically reviewed by Yamini Ranchod, PhD M.S. on June 17, 2019; Written by Mary Ann de Piety, CRT; available on <https://www.medicalnewstoday.com/articles/313109> cited on March 13, 2020.
25. Turkish bath benefits <https://www.turkishbaths.org/turkish-bath-benefits/> Last visited 13 February 2020; 2100 hrs IST.
26. Sweat N Chill Zone. Difference between a sauna and a Turkish bath: 2023 Dec 17 Available from: <https://www.sweatnchillzone.com/>
27. The Science Behind Swedana: How Ayurvedic Therapeutic Sweating can Transform Your Health www.totalayurveda.in/swedana-ayurvedic-therapeutic-sweating/
28. Walk in chamber, cited at: <https://thermotron.com/equipment/humidity-chamber/walk-in-test-chambers.html>, cited on: 08-10-2018
- 29.. What are the Benefits of Hammām? Why Should I Go to Hammām? | Hürrem Sultan Hammām <https://www.hurremsultanhamami.com/en/>
30. Ahmad MZ, Ansari AN, Nayab M. Efficacy of Hammām-i-yābis (dry bath) in metabolic syndrome: a single arm, open-labelled clinical trial. Journal of Complementary and Integrative Medicine. 2022 Dec 5;19(4):1019-24.
31. ABBAS M, ANSARI AN, NAYAB M, AFZAL U, ABALKHAIL AA. Efficacy of Hot and Dry Bath (Hammām-i-Hār-Yābis) in Activities of Daily Living for Management of Post Stroke Hemiplegia: An Exploratory Clinical Trial. Journal of Clinical & Diagnostic Research. 2022 Mar 1;16(3).
32. Shiralkar VV, Jagtap PE, Belwalkar GJ, Nagane NS, Dhonde SP. Effect of steam sauna bath on fasting blood glucose level in healthy adults. Indian Journal of Medical Biochemistry. 2018 Apr 1;22(1):18-21.
33. Laukkanen T, Kunutsor SK, Zaccardi F, Lee E, Willeit P, Khan H, Laukkanen JA. Acute effects of sauna bathing on cardiovascular function. Journal of human hypertension. 2018 Feb;32(2):129-38.
34. Birle PA, Anusha DT, Queen ZE. Immediate Effect of Steam Bath Followed by Cold Shower on Body Temperature Among the Healthy Individuals: A Single Arm Study. DOI: <https://doi.org/10.52403/ijhsr.20230102>.