



Awareness and Utilization Pattern of Unani Medicine in India: A Systematic Review

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Abstract

Unani medicine is one of the traditional medical systems in India that is practiced and taught in an organized manner. While going through the literature, it has been observed that in the past, not many efforts have been made to understand the awareness level and utilization pattern among the population. This systematic review was conducted to better understand the awareness and utilization pattern of Unani medicine in India. Using the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) guideline, the results of survey-based studies conducted about the awareness and utilization pattern of Unani medicine in India were systematically reviewed. Thirteen studies conducted on awareness or utilization patterns, which exclusively represented data on Unani medicine and not Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy (AYUSH) in general, were included in the present systematic review. A wide variation regarding awareness of Unani medicine is observed, ranging from 28.9% to 100% in different populations. Only five studies reported utilization patterns, which also varied considerably (13.8% to 74%). Unani Medicine is generally used in musculoskeletal disorders (20%-60.2%) and skin disorders (21.1%-64.9%). On the other hand, fifty-seven papers on surveys of CAM and AYUSH were found regarding utilization and consumption patterns. The findings demonstrate that thirteen papers entirely focused on the Unani System of Medicine. Henceforth, the awareness of the Unani system of Medicine has not been reported among the masses, and to provide its maximum benefits, certain strategies need to be formulated.

Keywords: Unani medicine; Awareness; Utilization; Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy (AYUSH)

Introduction

India has a rich heritage of medical wisdom conserved from traditional healthcare systems. There is widespread use of traditional medicine across developing countries, with a considerable rise in western countries [1]. Despite incredible advances in modern science, technology, and allopathic medicine, we are still unable to provide high-quality healthcare to all. A large number of people depend on traditional med-

icine for their primary healthcare. Indian traditional medicinal systems like Ayurveda, Siddha, and Unani have a very long history of effective use in healthcare. Modern research also acknowledges the importance of these systems [2].

The Indian System of Medicine represents a way of healthy living valued with a long and unique cultural history, incorporated with the best of the influences that came from contact with other civilizations.

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Greece (resulting in Unani Medicine), Germany (Homeopathy), or the Indian scriptures/sages, put forth the science of Ayurveda, Siddha, Homeopathy, Yoga, and Naturopathy. The Indian system of medicine recognizes AYUSH, an acronym for Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy, as a form of medical treatment [3].

Unani medicine is popular in South Asian countries and its use is also considerably growing in other parts of the world. It has now become part of the mainstream system of medicine in Bangladesh, India, Iran, Pakistan [4].

Unani medicine is a comprehensive medical system that meticulously deals with various states of health and diseases. It provides preventive, promotive, curative, and rehabilitative healthcare. The fundamental framework of this system is based on its holistic approach. The influence of the surroundings and ecological conditions on human health holds immense importance in this medical system [5]. It is a recognized form of medicine, which has been systematically integrated into the national healthcare delivery system by the Government of India.

While going through the literature, it has been observed that very few studies have been carried out to understand the awareness and utilization pattern of Unani medicine in India. Several survey-based studies have been conducted on selected populations with the objectives of figuring out the awareness and utilization pattern, primarily of AYUSH medicines, which also present small data regarding the Unani medicine. Very few studies have reported data exclusively on awareness and utilization patterns of the Unani system of medicine.

Understanding the utilization pattern of Unani medicine is important for various reasons, including its considerable integration with the biomedicine-based health care systems. The present systematic review is carried out as an attempt to compile the already generated data regarding the perception, awareness, and utilization pattern of Unani medicine in India. This study is expected to help in identifying lacunae and increase the accessibility of Unani Medicine amongst the masses.

Methodology

Data sources and searches

This systematic review followed the recommendations in the PRISMA statement. The following databases were searched in June 2020: MEDLINE, Google Scholar, PubMed, Science Direct, Open J, and Scopus. The search was restricted to studies published between 2010 and 2020. The reference lists of retrieved papers were also searched for additional literature.

Study selection

The search strategy includes the use of keywords i) Unani and AYUSH system of medicine, (ii) awareness regarding Unani and AYUSH system, (iii) consumption pattern, surveys or patterns of use of Unani medicine and iv) population-based study regarding Unani. Studies were included if they reported consumption or utilization pattern of Unani medicine within a representative general, as well as the specific population in India.

Data extraction

Only those studies are included which epitomize data regarding awareness and utilization pattern of Unani medicine specifically, along with other systems of AYUSH medicines. Studies considered all AYUSH systems, not specifically Unani medicine, were excluded. Studies were also excluded if represented data on alternative medicine, Complementary and Alternative Medicine (CAM), not specifically mentioning Unani medicine. The studies conducted in India are also excluded. To extract the data regarding Unani medicine, abstracts as well as full-text publications were thoroughly studied. After removing duplicate records, a unique list of records/studies was screened by two independent authors. Data were retrieved in an excel spreadsheet by each of the authors. In case of large missing data, authors of the papers were contacted. Information on study characteristics, sample size, socio-demographic variables, utilization, and consumption of Unani medicine is included. In addition, any other information found suitable for this review is recorded in the excel spreadsheet.

Results

N = 57 papers on surveys of CAM and AYUSH were found regarding utilization and consumption pattern, out of which 44 were excluded because data on the Unani system of medicine was not mentioned in them. Only 13 papers met the inclusion criteria and were included in the review. The key data of all surveys are summarized in Table 1.

A total of 13 studies were included in this systematic review, all of them were cross-sectional. The total number of participants included in these 13 studies was 4,962. The highest number of the studies (n = 3; 23.07%) was published in 2020. Out of 13 reviewed studies, 4 studies were carried out on patients attending hospital OPDs (either tertiary care allopathic hospital or AYUSH hospital) in which a total of n = 1450 (29.2%) patients were included [6,11,13]. As reported in 4 studies [8,10,14,18], 1216 (24.5%) participants were students of various fields like Unani medicine, allopathic medicine (MBBS), and pharmacy. One study was conducted on the general population with a sample size of 1149 (23.2%) [17]. Two studies were

conducted on 727(14.7%) participants, who were allopathic doctors [9,12], while one study adopted adult males with a sample size of 300 (6 %) [15]. Another study was carried out with educated adults on a sample size of 120 (2.4%) [16].

Gender-wise distribution was reported in 07 studies only (n = 2842), It has been revealed that the majority were males 1795(63.2%) followed by females 1047 (36.8%) [7-9,14-17]

Educational status of the adopted population was reported in maximum studies (n = 10, 76.9%) [7-10,12,14-18]. It has been observed that 3,807 (76.7%) participants were literate, as a majority of them were

doctors, interns, and students of various fields. Also, there is a study conducted exclusively on the educated classes [16].

Three studies (n = 1877) also reported on the classification of participants in terms of their rural or urban background [15,16,17]. From the results of these studies, it has been calculated that the majority of participants (n=1147, 61.1%) were from urban areas, followed by 523 (27.9%) participants from rural areas. Total of 148 (7.9%) of participants were from the semi-urban area; while only 59 (3.1%) belong to metropolitan cities. One study was conducted exclusively on the population of the rural areas [15].

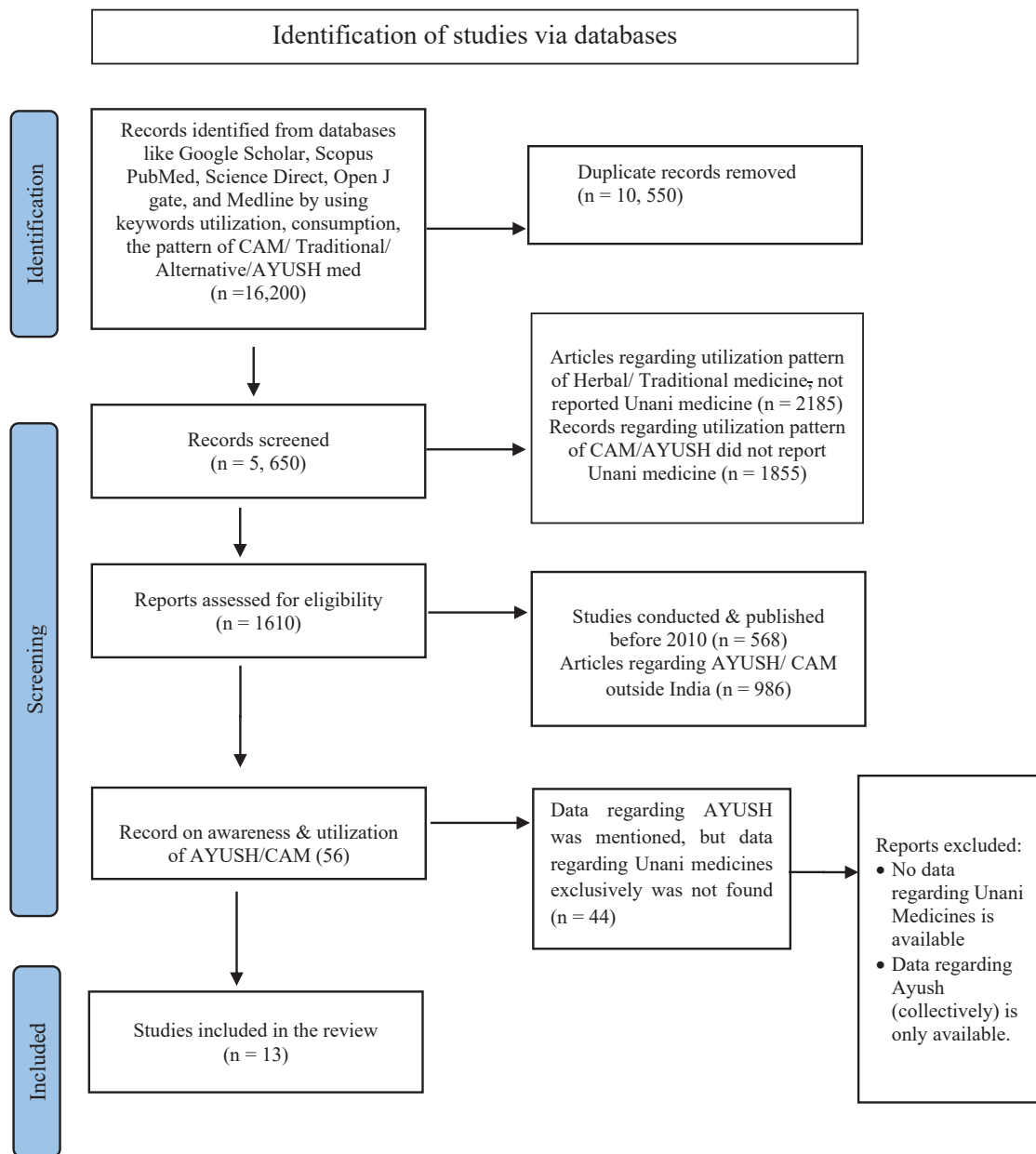


Figure 1. PRISMA flowchart for data extraction

Table 1. Results of selected surveys on the awareness and utilization pattern of UNANI medicine

S. No	First Author and year of publication	Year of study	Sample size	Study site	Study Population	Results	
						Awareness	Utilization
1.	Bhalerao et al (2013)	2010	650	Mumbai	Patients with chronic diseases (Diabetes Mellitus, Human Immunodeficiency Virus, Rheumatoid Arthritis, epilepsy)	-	1% utilization in specific diseases
2.	Kong F H et al (2013)	2011	238	Southern India	Medical Practitioner	54%	-
3.	Wani et al (2014)	2011	100	New Delhi	Students	100%	-
4.	Ahmad et al (2015)	2014	428	Haryana	Students	-	13.8%
5.	Somani (2016)	2015	350	Karnataka	Medical Students	-	-
6.	Akram et al (2016)	YNM	120	Lucknow	Educated people	-	-
7.	Imran et al (2017)	2016-17	300	Haryana	Healthy adult males	-	74%
8.	Anandaraj et al (2017)	2014	335	Karnataka	Patients of District AYUSH hospital	-	24.5% (by retrospective data)
9.	Singhal & Roy (2018)	2016-17	650	New Delhi	Doctors & Interns	28.9%	-
10.	Farah (2019)	2018	100	New Delhi	Patients attending OPDs	-	36.6% (by retrospective data)
11.	Ojha et al (2020)	YNM	77	Mumbai	Allopathic doctors	34%	-
12.	Raheem et al (2020)	2017	1149	Andhra Pradesh	Visitors attending Arogya Mela	88.4%	-
13.	Nazli et al (2020)	2019	365	New Delhi	Patients of Unani OPDs	100%	-

*OPD- Out Patient Department

**YNM- Year Not Mentioned

Table 2. Perception of Unani medicine efficacy among different studies (N = 915)

Perception	Studies				
	Wani, 2014 (n=100)	Akram et al, 2016 (n=120)	Somani, 2016 (n=380)	Kong FH, 2013 (n=238)	Ojha et al, 2020 (n=77)
Effective	-	24%	32.6%	11%	-
Mildly/ slightly effective	22%	-	-	-	6.5%
Somewhat effective	-	-	-	-	11.7%
Moderately/	46%	-	-	45.9%	9.1%
Extremely effective	38%	4%	-	-	2.6%
Harmful	-	-	28.3%	-	-
Not effective	-	-	-	43.1%	70.1%

Table 3. Demographic profile of participants

Gender (N=2842)	Education (N=3807)	Rural or urban background (N=1877)
Males 1795 (63.2%) Females 1047 (36.8%)	Literate 3,807 (76.7%)	Urban areas- 61.1% Rural areas-27.9% Semi-urban area- 3.1%

Awareness

Awareness levels about Unani medicine were reported only in 06 studies [7,8,9,12,17,18]. As the study population was mixed, including students, patients attending OPDs, the general population and doctors, awareness patterns also varied accordingly. Maximum awareness (100%) was reported in the participants who were either Unani medicine students or patients attending Unani OPDs at hospitals [7,8], followed by general population (88.4%) [17]. Two studies [9,12] observed 29.4% awareness of Unani medicine among the participants who were allopathic doctors; while 54% was reported among medical students [18]. Out of these six studies, 02 studies (n=1116) also testified about the source of awareness regarding the Unani medicine [8,17]. From the findings of these 02 studies, it has been revealed that maximum awareness about Unani medicine (50%) was obtained through friends, family, or relatives. The second major source of information reported by 12.7% of participants was the internet, followed by news & media which was reported by the 12.1% population. Other sources of information reported by 10.4%, 4.9%, 4.5%, and 4% of the population were through TV/Radio, brochures regarding Unani medicine, Unani students, and public lectures, respectively.

Utilization pattern

Only 03 studies reported direct data about the utilization pattern of Unani medicine [13,14,15]. Maximum utilization of Unani medicine (74%), was reported in younger adults of rural area of Nuh, Haryana [15].

13.8% utilization was reported in pharmacy students in the study conducted on a sample size of 428 [14]. It has been observed that specific disease wise utilization of Unani medicine was assessed by only 01 study, according to which only 1% of adopted population utilized Unani medicine for diseases like HIV, rheumatoid arthritis and epilepsy respectively [13]. Two studies with 1514 participants also represented data regarding reasons for opting Unani medicine as health care system [7,17]. 36.9% participants responded positively for using Unani as better health care system. Among them, 70.6% mentioned safety/ minimum associated side effects as a reason for opting Unani medicine; while 9.6% believed in efficacy of the treatment. 8.7%, 5.7% and 5.1% population mentioned cost effectively, treating root cause of disease and palatability, respectively, as main reasons for adopting Unani medicine as treatment. While observing data regarding disease wise efficacy of Unani medicine, 04 studies reported the consumption pattern of Unani medicine for management of different diseases. Among these studies, it was revealed that Unani medicine is used for the management of musculoskeletal disorders. This utilization varied from 20% to 60.2%, as evaluated by different studies [6,7,11,17]. Considerable variation (21.1% to 64.6%) was also observed in the adopted population who preferred it for management of skin disorders [7,17]. Its utilization was also reported in the management of liver disorders, respiratory disorders, lifestyle disorders, gastrointestinal disorders, genitourinary disorders and different fevers by 57.7%, 43.8%, 50.4 %, 46.9%, 22.9% and 59.2% of participants, respectively [17].

Table 4. Disease wise utilization of Unani Medicine (n = 1949)

Disease/ Disorders	Nazli et al, 2020 (n=365)	Raheem et al, 2020 (n=1149)	Farah, 2019 (n=100)	Anandraj, 2014 (n=335)
Musculoskeletal disorder	29.6%	60.4%	22.3%	20%
Gastrointestinal disorder	25.8%	46.88%	18.2%	18%
Dermatological disorders	21.1%	64.6%	9.5%	3%
Liver disorders	NA	57.7%	NA	NA
Lifestyle disorders	NA	50.4%	10.6%	8%
Respiratory diseases	NA	43.75%	8.2%	8%
Genitourinary	NA	22.92%	10.7%	NA

Perception

Four studies represented data regarding participant's perception among population towards efficacy of Unani medicine [8,9,10,12]. This perception was recorded in various studies conducted on utilization pattern of Unani medicine. Variables used for the purpose was in terms of effective, mildly effective, moderately effective, extremely effective and harmful. From the findings of these studies, it was observed that perception towards efficacy of Unani medicine varied from one study to another. It was reported effective in the range of 24% and 32.6% [10,16]; while 03 researchers reported Unani medicine very effective, which lies between the range of 4% to 38% [8,12,16]. One study reported the perception of Unani medicine as harmful, which was observed by 28.3% participants [10].

Discussion

Present systematic review unveiled the fact regarding lack of studies conducted and published about awareness as well as utilization pattern of Unani medicine in India. Most of the studies were steered with objectives to determine the awareness, utilization and consumption pattern of AYUSH systems of medicine. In the light of information collected and collated from 13 studies exclusively about Unani medicine, it may be inferred that there is a lack of awareness regarding this system of medicine. Awareness is maximum (100%) in population which was adopted from Unani OPDs / Unani Centers or Unani college itself. Among general population, this awareness is 88.4%, which is mostly observed in the age group between 31-45 years, particularly among upper class section of the society. Awareness pattern is also predisposed by education and gender of the population as it has been observed that Unani medicine is more familiar in females. These findings are in consonance to a study, which reported relatively high use of AYUSH systems of medicine in females [19]. Awareness of Unani medicine among allopathic doctors and medical students is 35.2%. Out of this, 29.4% were from New Delhi [12]; while 54% doctors [18] were from southern India. This variation may be attributed to the widespread use of AYUSH systems of medicine in southern India [20]. It has been observed that Unani medicine is generally used on the recommendations of family, friends or relatives. It could be due the cultural affinity of Indian population towards traditional systems of medicine.

As far as utilization of Unani medicine is concerned, maximum utilization was reported in rural areas of Nuh, Haryana [15]. Primarily, the studies conducted on utilization pattern of Unani medicine on patients attending OPDs of district and state level AYUSH hospitals in Karnataka and New Delhi were on a sample size of 335 and 100, respectively. Apart from the above mentioned cross sectional questionnaire based

studies, these two studies have also collated and reported the retrospective data (n=1, 76,833) of one year from the hospital OPD records. From this retrospective data record, it has been observed that 35.5% patients utilized Unani medicine. These two studies have also reported gender wise utilization pattern of Unani medicine. It is observed that Unani medicine is utilized more frequently by females (54.34%) followed by males 40.28% [6,11]. The finding is in consonance with a study conducted by Rudra et al, 2017. Self-use of Unani medicine has been observed among 13.8% pharmacy students [14]. It may be attributed to the lack of awareness and affordability concern. One researcher has also mentioned lack of awareness, slow action and affordability concern as the possible reasons for less utilization of Unani medicine among the population [8].

There appears to be a wide difference in utilization pattern of Unani Medicine according to region or cultural variations. Most people in India prefer allopathic mode of treatment due to common trend, awareness, rapid action and easy access to these medicines. Unani medicine is opted due to its least or negligible side effects and for a generally considered view of treating the root cause of diseases [7,8,17]. These findings are coherent to one study conducted in Dhaka on the awareness of Unani medicine [21].

Disease wise utilization of Unani medicines was also reported by 4 studies in their respective studies [6,7,11,17]. It is revealed that Unani medicine is more used in musculoskeletal disorders (20%-60.2%) followed by skin disorders (21.1%-64.9%). Three studies [6,7,11] have reported that most OPD patients prefer Unani medicine for treatment of musculoskeletal disorders (20%-29.6%) followed by gastro-intestinal disorders 25.8% [6].

Perception towards the efficacy of Unani medicine has also observed to be considerably varied in mentioned by different researchers. 38% students belonging to Unani medicine stream perceive it as very effective [8]. If discernment of allopathic doctors and medical students is taken into consideration, again extensive variation is recorded. 30% doctors among adopted sample size have a perception that Unani medicine is extremely effective; whereas 70% reported it as not effective [12]. 32.6% of allopathic medical students reported Unani medicine as effective; while 28.3% had perception about its harmfulness [10]. This finding could be attributed to the lack of awareness about Unani medicine among the doctors of allopathic stream. Another reason for this variation may be considered due to different areas and regions where these studies were conducted.

Conclusion

It may be concluded that there is indeed, a lack of

awareness regarding Unani medicine in India. Available data is very uneven regarding utilization pattern of Unani medicine too. There is also lack of observational studies in mixed population, which could have reflected a better picture about utilization pattern of Unani medicine.

Declaration of Interest

None.

Funding Agency

No such involvement

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