

Ayurvedic Science-An Undergraduate Perspective

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Abstract

Ayurvedic medicine is considered as the world's oldest medical system. Ayurveda originated in India over 5000 years ago in the magnificent Himalayas. Ayurveda is a pseudoscientific system of medicine with historical roots in the Indian subcontinent. Ancient Ayurvedic texts also taught surgical techniques, including rhinoplasty, kidney stone extractions, sutures, and the extraction of foreign objects. It is still practiced in the South Indian population. There are studies showing data that about 80% of Indian patients use ayurvedic therapy instead of allopathy. This is a cross sectional study conducted among 100 dental students through a questionnaire with the help of an online survey link. The responses show 79% of the participants agree that knowledge about Ayurveda is important to dental students. 80% of the participants agree that Ayurveda should be integrated with modern medicine. Dental students have a good knowledge about Ayurvedic medicine and medicinal herbs that are used in the process.

Key words: Ayurvedic medicine, Modern medicine, Medicinal herbs.

Introduction

Ayurveda is a conjugation of two Sanskrit words Ayus means life and Veda means science thus Ayurveda means science of life.¹ Ayurveda originated in India more than 5000 years ago and is often called as (Mother of all healing)². The purpose of Ayurvedic medicines was to synchronise and maintain the body, mind and spirit. This balance is believed to lead happiness, health and prevent illness³. Ayurveda believes in 5 basic elements (space, fire, water, earth and air) which manifested in the human body as three basic humours known as tridosas

(vata, pitta and kapha). These three tridosas govern creation, maintenance and destruction of bodily tissues as well as the assimilation and elimination. Ayurveda basically comprises fruits, vegetables, spices and natural herb essence which helps in treating the diseases without causing any side effects on the patient. Meanwhile, allopathy cures the illness in no time, but leaves behind some side effects like allergies, pain etc..⁴. Ayurveda also helps dental professionals in enhancing oral health and promoting periodontal health status.⁵

According to the shalyatantra and shalakyatantra (one of the branches of Ayurveda) 65 varieties of oral diseases can arise in 7 body locations - 8 on the lips, 15 on the alveolar margin, 8 in teeth, 5 on the tongue, 9 on the palate, 17 in the oropharynx and 3 in a generalised form. For these types of diseases Ayurveda advocates procedures such as dant Dhanvanti (Brushing), jivha Lekhana (tongue scraping) and gandoosha (gargling) or oil pulling and tissue regeneration therapies for maintaining proper oral health^{5,6}. Chewing sticks in the morning as well as after every meal is also recommended

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in Ayurveda to prevent oral diseases. The most famous herbal chewing stick is the neem⁷. Herbs with medicinal properties are useful and effective sources for treatment of various disease processes⁸

The main aim of this study is to assess the knowledge of dental students about Ayurvedic science and different medicinal herbs used in the procedure.

Materials and Methods

Study Design

A cross sectional survey was conducted among first year dental students to evaluate their knowledge and awareness level on ayurvedic science and medicine. The study population was 100 participants. The participants did the survey voluntarily and know incentives were given to them. The survey was conducted in the month of May , 2020. Ethical approval and informed consent from the participants were obtained.

Survey Methodology

The questions were prepared after extensive literature. The questionnaire was reviewed and amendments were made to improve clarity of questions and eliminate ambiguous responses. The survey methodology was a structured questionnaire with both open and close ended questions⁹. It consists of a brief introduction regarding research objectives. 12 questions were circulated to the participants through Google Forms.

Data Analysis

Only completed filed online forms were included in this study . The filled responses were verified by the 2 viewers and collected on the same day. The entered data was analyzed using SPSS Software. Descriptive analysis was performed to calculate frequencies of categorical variables^{10,11,12,13,14}.

Results and Discussion

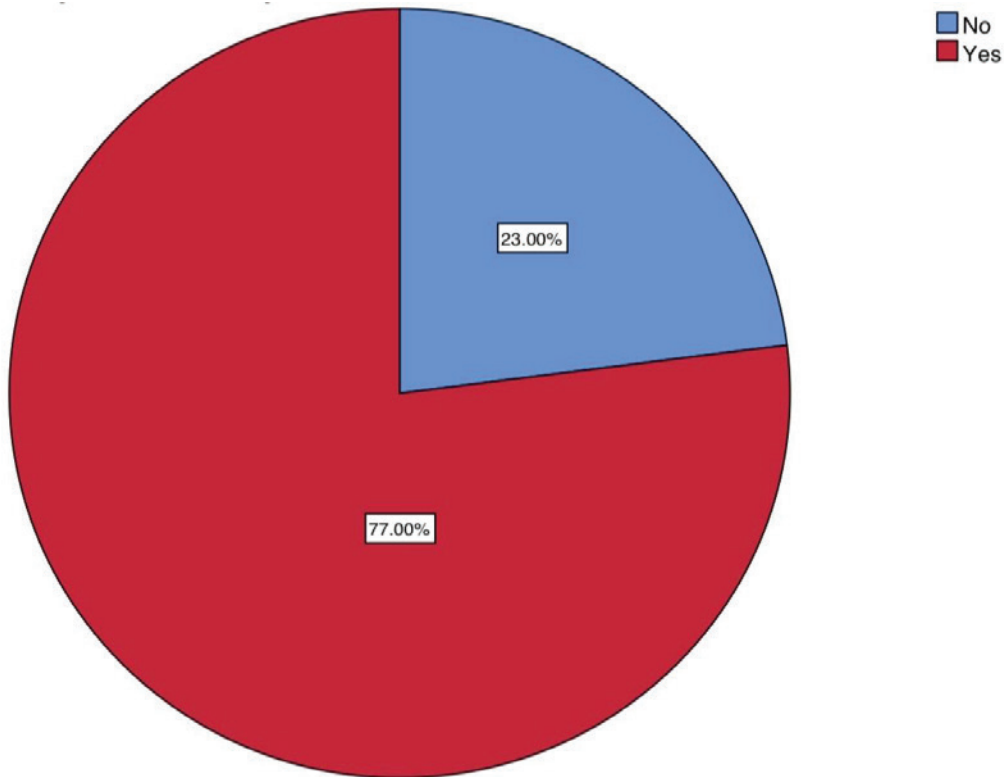


Figure 1:The pie chart shows responses to the question “Ayurveda is considered the world’s oldest medical system”. The Majority of the participants are aware(77%,red) whereas the remaining 23% are unaware about this fact(blue).

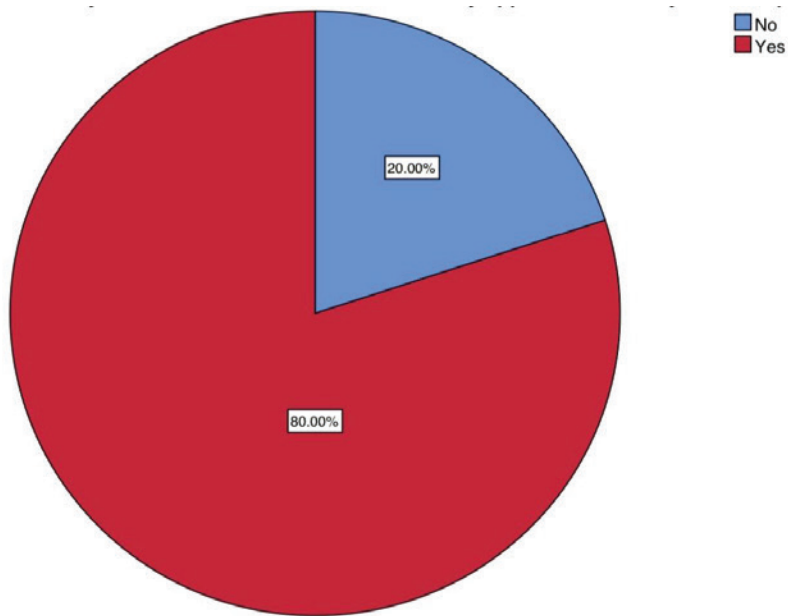


Figure 2: The pie chart shows responses to the question “Ayurveda successfully applied in dentistry”. The majority of the population are aware that ayurvedic medicine can be successfully applied in dentistry as antiseptics and antioxidants(80%,red) whereas the remaining 20% are unaware about this fact(blue).

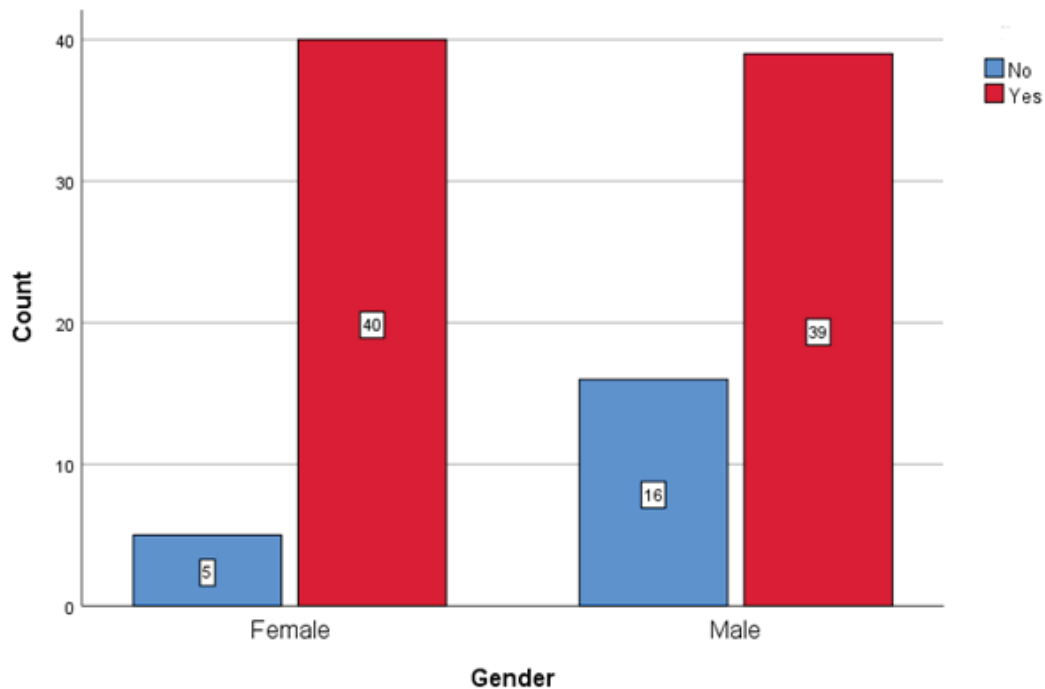


Figure 3: Bar chart representing the association between gender and knowledge of ayurveda important to dental students. X axis represents gender and Y axis represents knowledge of ayurveda important to dental students. Out of 79% of the public who are aware (red), 40% constitute female and the remaining 39% are male. Hence more women think that knowledge of ayurveda is important to dental students. Chi square test was done and the association was found to be statistically significant (Person’s Chi square value: 4.823, df: 1, P value: 0.0289 (< 0,05)).

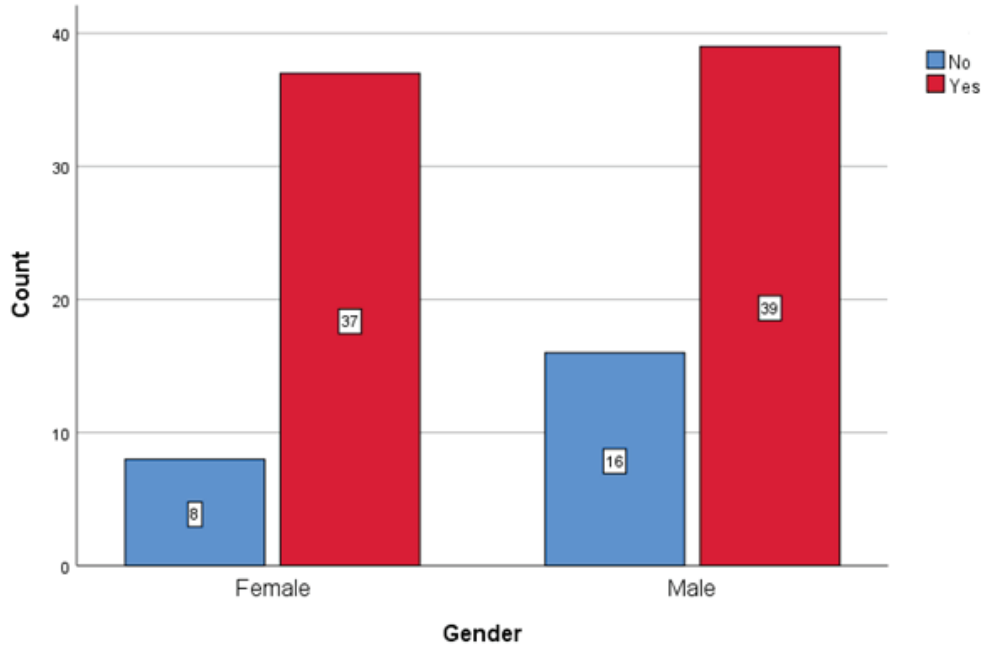


Figure 4: Bar chart representing the association between gender and usage of ayurvedic medicine . X axis represents gender and Y axis represents usage of ayurvedic medicine. Out of 76% of the public who are aware (red), 37% constitute female and the remaining 39% are male. Hence more men use ayurvedic medicine and it was also proved to be effective. Chi square test was done and the association was found to be statistically non significant (Person's Chi square value: 1.737, df: 1, P value: 0.188 (> 0.05)).

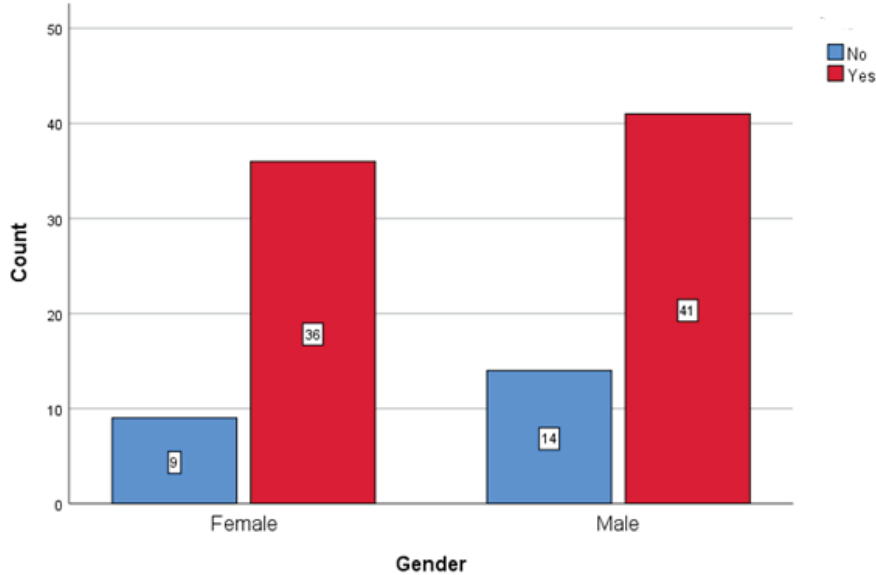


Figure 5: Bar chart representing the association between gender and ayurvedic medicine considered the world's oldest medical system. X axis represents gender and Y axis represents ayurvedic medicine considered as a world's oldest medical system. Out of 77% of the public who are aware (red), 36% constitute female and the remaining 41% are male. Hence majority of the men are aware that ayurvedic medicine is considered the world's oldest medical system. Chi square test was done and the association was found to be statistically non-significant (Person's Chi square value: 0.416, df: 1, P value: 0.519 (> 0.05)).

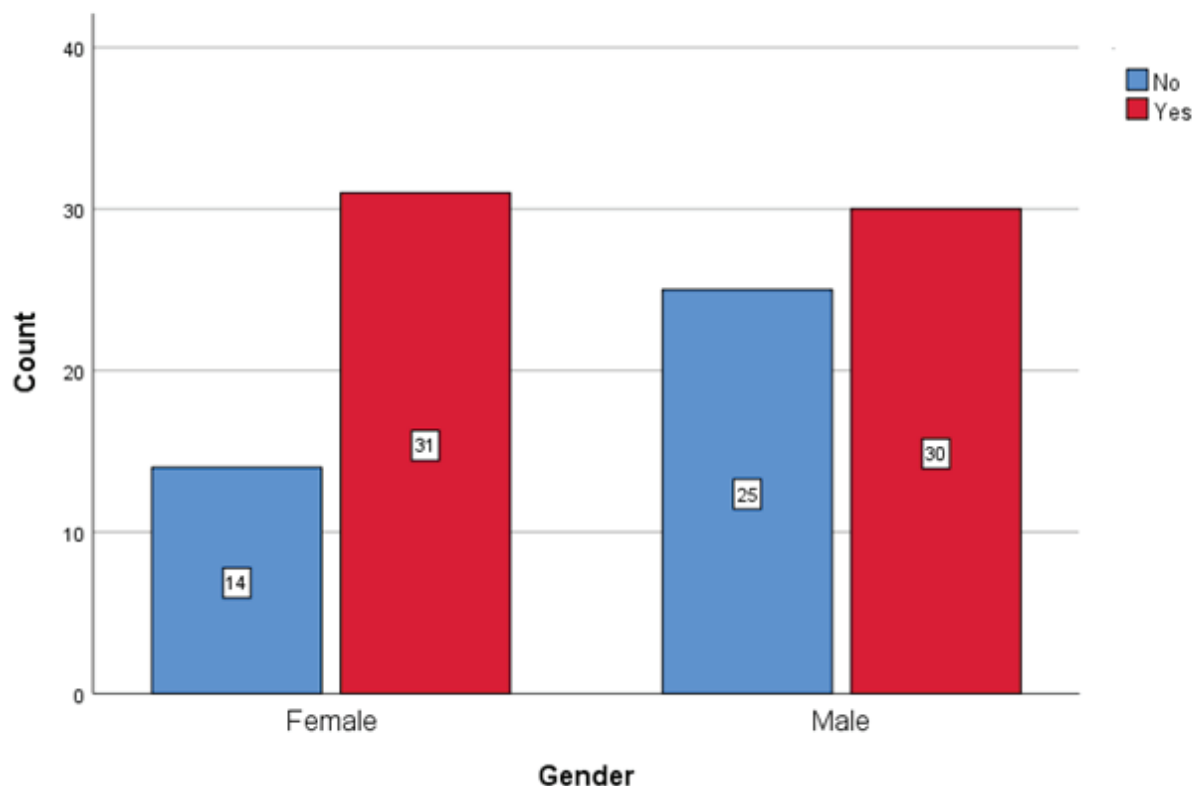


Figure 6: Bar chart representing the association between gender and real meaning of ayurveda. X axis represents gender and Y axis represents real meaning of ayurveda. Out of 61% of the public who are aware (red), 31% constitute female and the remaining 30% are male. Hence majority of the women are aware that the real meaning of ayurveda is science of life. Chi square test was done and the association was found to be statistically non-significant (Person's Chi square value: 2.140, df: 1, P value: 0.143 (>0,05)).

Survey population was sufficient enough to reach a conclusion regarding the knowledge of dental students

about Ayurvedic science. This survey was conducted among college students who are within the 18 year age group. Out of 100 responses given 55% were male and 45% were female, where most of the students have used Ayurvedic medicines. 77% of the dental students know that Ayurvedic medicine is considered to be the world's oldest medical system [figure 1]. 80% of the dental students know that Ayurvedic medicine can be successfully applied in dentistry as antiseptics and antioxidants [figure 2]. The bar graph representing Chi square analysis between gender and importance of ayurveda. X axis represents gender and Y axis represents importance of ayurveda towards dental students. Out of 79% of the public who are aware (red), 40% constitute female and the remaining 39% are male. Hence more women think that knowledge of ayurveda is important

to dental students. The result was found to be statistically significant (Person's Chi square value: 4.823, df: 1, P value: 0.0289 (<0,05)) [figure 3]. The bar graph representing Chi square analysis between gender and usage of ayurvedic medicine. X axis represents gender and Y axis represents usage of ayurvedic medicine. Out of 76% of the public who are aware (red), 37% constitute female and the remaining 39% are male. Hence more men use ayurvedic medicine and it was also proved to be effective. Chi square test was done and the association was found to be statistically non significant (Person's Chi square value: 1.737, df: 1, P value: 0.188 (>0,05)) [figure 4]. The bar graph representing Chi square analysis between gender and ayurvedic medicine is considered the world's oldest medical system. X axis represents gender and Y axis represents ayurvedic medicine considered the world's oldest medical system. Out of

77% of the public who are aware (red), 36% constitute female and the remaining 41% are male. Hence majority of the men are aware that ayurvedic medicine is considered the world's oldest medical system. Chi square test was done and the association was found to be statistically non-significant (Person's Chi square value: 0.416, df: 1, P value: 0.519 (>0.05)). [figure 5]. The bar graph representing Chi square analysis between gender and real meaning of ayurveda. X axis represents gender and Y axis represents real meaning of ayurveda. Out of 61% of the public who are aware (red), 31% constitute female and the remaining 30% are male. Hence majority of the women are aware that the real meaning of ayurveda is science of life. Chi square test was done and the association was found to be statistically non-significant (Person's Chi square value: 2.140, df: 1, P value: 0.143 (>0.05)). [figure 6].

From the responses it was evident that the majority of the respondents are aware of the origins of Ayurveda which was around 5000 years ago in the magnificent Himalayas, and the meaning of Ayurveda is science of life. There are also responses obtained for the most common element used in Ayurvedic medicine is oil, the most commonly used herbal extract is *Salvadora Persica* and *Acacia gum*, about Shiro Abhyanga massage, integration of the Ayurveda with modern medicine. The present research has origins from the team of investigators where previous studies were done based on clinical reports, interventional studies like ^{15,16,17}, in vitro studies like, ^{10,11,12,14} and systematic reviews ^{15,18,19, 20, 21, 22}. In a study done by Mankar NN, 93.40% of the participants think that knowledge of Ayurveda is important to dental students /medical students. 56% of participants stated that they have used Ayurvedic medicine and it was proved to be effective. 78% of the participants think that Ayurveda should be integrated with modern medicine²³. In a study done by Suchita R Gawde, 20% of the participants prefer using Ayurvedic medicine. 60% of the participants agreed that cooperation of Ayurveda therapies into practice would result in increased patient satisfaction and attract more people ²⁴. In a study done by H. Katole, 27.11% consumers prefer using Ayurvedic medicine ²⁵. Even though many strict protocols were followed during this study there are certain limitations as this was a cross sectional study done only among 100 dental students. Dental students are not much aware about the various

procedures that are practiced in Ayurveda like Shiro Abhyanga massage. The future goal of Ayurveda is to promote good health among individuals and cure deadly diseases like diabetes, cancer, arthritis and HIV with natural ingredients.

Conclusion

Ayurvedic medicine is considered as one of the best medical systems in the world because each and every ingredient that is used for producing a product is natural and does not result in any side effects.

According to our survey it is observed that dental students have a very good knowledge about Ayurvedic science and the medical herbs used in it.

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Ethical Clearance: Not Required

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