

Traditional remedy for treatment of Asthma-KAP study

Authors:

Dr. Asma fathima¹, Dr. Jeeva George², Dr. Balakeshwa Ramaiah³

¹Pharm D, Department of pharmacy, Karnataka college of pharmacy, RGUHS, Bengaluru, India

²Assistant Professor, Department of pharmacy, Karnataka college of pharmacy, RGUHS, Bengaluru, India

³HOD and professor Department of pharmacy, Karnataka college of pharmacy, RGUHS, Bengaluru, India

Corresponding Author:

Dr. Asma fathima

Pharm D, Department of pharmacy, Karnataka college of pharmacy, RGUHS, Bengaluru, India

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ABSTRACT:

Background: This study analyzes scientific studies on the efficacy of "ichthyotherapy" as a treatment for asthma. Annually, a significant number of individuals suffering from respiratory ailments visit Hyderabad, India, in search of an exceptional remedy. During a certain occasion, the Telangana government encourages the dissemination of "Fish Prasadam." This conventional therapy involves the insertion of a confidential herbal mixture into a little Murrel fish, which is then ingested by the individual seeking treatment. Further Turmeric (*Curcuma longa*) is known for its anti-inflammatory and antioxidant properties. **Material and Methods:** A statistical study was performed to analyze the magical properties of the remedy for asthma amongst N=1837 participants. This research used a cross-sectional design to assess the knowledge, attitude, and practices (KAP) related to the utilization of a traditional herbal cure for treating asthma among patients. A questionnaire study was further performed. **Results:** The study demonstrated very significant differences between the groups, with p-values less than 0.001 for both ANOVA and Levene's test. This suggests that the group differences seen in the analysis of variance (ANOVA) and the assessment of variances using Levene's test are not likely to be the result of random chance. Instead, they reflect the presence of genuine differences between the groups being compared. **Conclusion:** This research investigated the public's view of "Fish Prasadam" as a treatment for asthma. The results showed significant variations across groups in terms of their knowledge, attitude, and practices (KAP) related to this traditional cure (p-value < 0.001). These results indicate that more research should be conducted on the knowledge, attitudes, and practices (KAP) related to Fish Prasadam, as well as its potential therapeutic benefits.

Keywords: Asthma, traditional medicine, Unani Medicine, Anti-inflammatory, Bronchoconstriction.

INTRODUCTION:

Asthma is a prominent worldwide health concern that affects individuals of all age groups. Unani medicine provides a range of formulations to address respiratory issues, one of which is Sufoof Dama Haldi Wala (SDHW). The objective of this research was to create quality criteria for solar domestic hot water (SDHW) systems by using a range of scientific metrics. SDHW is prepared using a traditional formula that combines wheat (*Triticum aestivum*) and turmeric (*Curcuma longa*). The produced SDHW was assessed for its physical qualities, including color and texture, as well as its moisture content, acidity/alkalinity (pH), extractable components, and ash concentration. The microbiological tests evaluated the total number of bacteria and the existence of certain pathogenic germs.

In addition, the research detected the existence of diverse plant compounds and quantified particular components via the use of Atomic Absorption Spectrophotometry, a scientific method. The study determined that SDHW is a flavorless substance, appearing as a pale yellowish-black powder with a smooth and glossy appearance. The defined quality criteria guarantee consistent attributes after thorough investigation. The tests verified a microbiological profile that is safe, with a low quantity of bacteria and the absence of hazardous microorganisms, as well as levels of heavy metals that are below permissible limits. The elemental analysis yielded useful information about the composition of the formulation. It is essential to maintain quality control of herbal formulations to ensure their acceptability in

contemporary medicine. This study establishes the groundwork for a uniform document on SDHW, which sets the stage for future investigations into its possible therapeutic attributes and advancement [1].

Asthma is a widespread, long-lasting illness that affects individuals of all age groups worldwide. It is very prevalent in youngsters, being the most common chronic condition in this age range. This prevalent ailment has a substantial influence on the overall quality of life, leading to restrictions in daily activities and financial burden owing to the expenses associated with medicine. According to the (WHO), the number of persons affected by asthma globally in 2016 was estimated to be over 339 million. India alone accounted for 37.9 million cases [2]. Asthma is the result of an intricate interaction between hereditary and environmental variables. This interaction results in inflammation of the airways, causing them to become narrower and perhaps leading to the formation of mucus. This process triggers symptoms such as coughing, difficulty breathing, and wheezing. Although traditional medicine provides methods to treat the condition, there is yet no remedy available. Significantly, more than 80% of fatalities connected to asthma transpire in low- and lower-middle-income nations, underscoring the inequalities in the availability of efficacious remedies [3]. Unani medicine, a traditional medical system, provides many formulations for the treatment of respiratory problems, including as asthma (known as Dama) [4]. These compositions are renowned for their efficacy and cost-effectiveness [4]. A specific formulation called Sufoof Dama Haldi Wala (SDHW) has been used for many years to treat asthma and other respiratory ailments. This information is described in Bayaze Kabir Vol. II [4]. Nevertheless, despite its previous historical use, SDHW now does not possess well-defined quality criteria. The process of standardization is an essential and pivotal stage in gaining acceptance for herbal medicine. Standardization is a crucial procedure that guarantees the quality, purity, and effectiveness of herbal compositions [5]. This method is crucial for providing a valid rationale for incorporating ancient treatments into contemporary medicine [5]. In response to this need, the current research sought to develop precise benchmarks for solar domestic hot water (SDHW) systems by analyzing a range of physicochemical properties [5].

LITERATURE REVIEW:

In Hyderabad, India, during the monsoon season, the Bathini family carries out a unique ritual known as "fish prasadam" to treat asthma and other respiratory illnesses. This tradition, which has been practiced for over 173 years, involves swallowing a live murrel fish

filled with a yellow herbal paste. Patients consume the fish whole, without water, and vegetarians are offered an alternative of the herbal paste mixed with jaggery. The Bathini family also provides specific dietary recommendations and advises patients to take the fish prasadam for three consecutive years [6][7]. While asthma is a chronic condition, effective treatments and lifestyle changes can manage symptoms and allow for a normal life [5]. However, a controversial ritual in Hyderabad, India, offers a supposed cure: the fish prasadam [6, 7]. Every June, during the monsoon season, asthmatic patients gather for this unique practice [6, 7]. The Bathini family administers "fish prasadam," a live murrel fish filled with a yellow herbal paste, which patients swallow whole [6, 7]. This practice has continued for over 170 years [6, 7]. For vegetarians, an alternative involving the herbal paste mixed with jaggery is offered [6, 7]. The Bathini family prescribes a specific diet and recommends consuming the fish prasadam for three consecutive years, claiming it permanently cures asthma and other respiratory problems [6, 7]. However, the family keeps the herbal formula secret, stating it was received from a saint in 1845 [6, 7]. The ritual has drawn criticism for the lack of transparency regarding the ingredients and its potential health risks [5]. Dr. C.L. Venkata Rao, of the Indian Medical Association, challenged the practice in court, arguing that any undisclosed medication falls under drug regulations [8]. The Bathini family defends their tradition, stating the medicine loses its potency if revealed and that commercialization would be detrimental [6, 7]. They claim the formula has been passed down through generations and has successfully treated hundreds of thousands [3, 4]. However, these claims lack official verification [8]. Dr. Ajit Vigg, a respiratory specialist, disputes the efficacy of the fish prasadam, citing no scientific evidence and even observing worsened conditions in some patients [8].

MATERIAL AND METHODS:

A statistical study was performed to analyze the magical properties of the remedy for asthma amongst N=1837 participants. This research used a cross-sectional design to assess the knowledge, attitude, and practices (KAP) related to the utilization of a traditional herbal cure for treating asthma among patients. The sample consisted of people who had been diagnosed with asthma. These individuals were chosen using a simple random selection method from the patient register of a local healthcare centre. The data were gathered via a well-designed questionnaire that was constructed by drawing upon existing literature and consulting with experts. The questionnaire included many aspects, including demographic

information, knowledge of asthma and its treatment, attitudes towards traditional treatments, and current practices. All subjects provided informed consent.

Demographic data was summarized using descriptive statistics, while correlations between KAP scores were assessed using statistical analysis.

RESULTS:

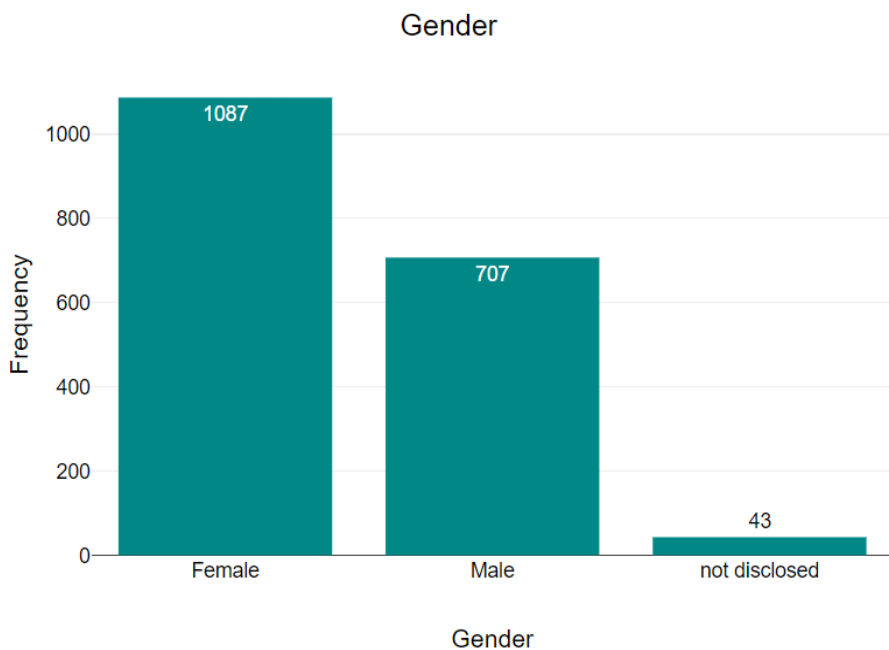


Fig. 1 shows the gender distribution of the participants in the survey

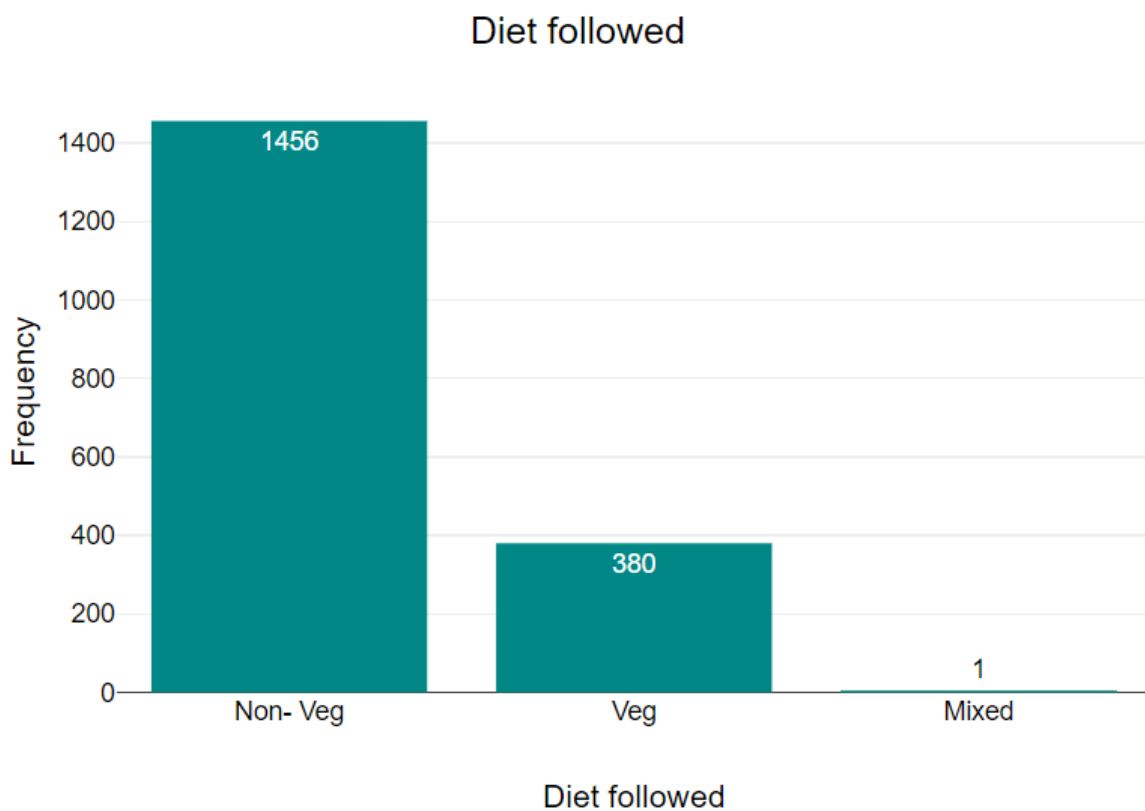


Fig. 2 shows the type of diet intake by the different participants involved in the survey.

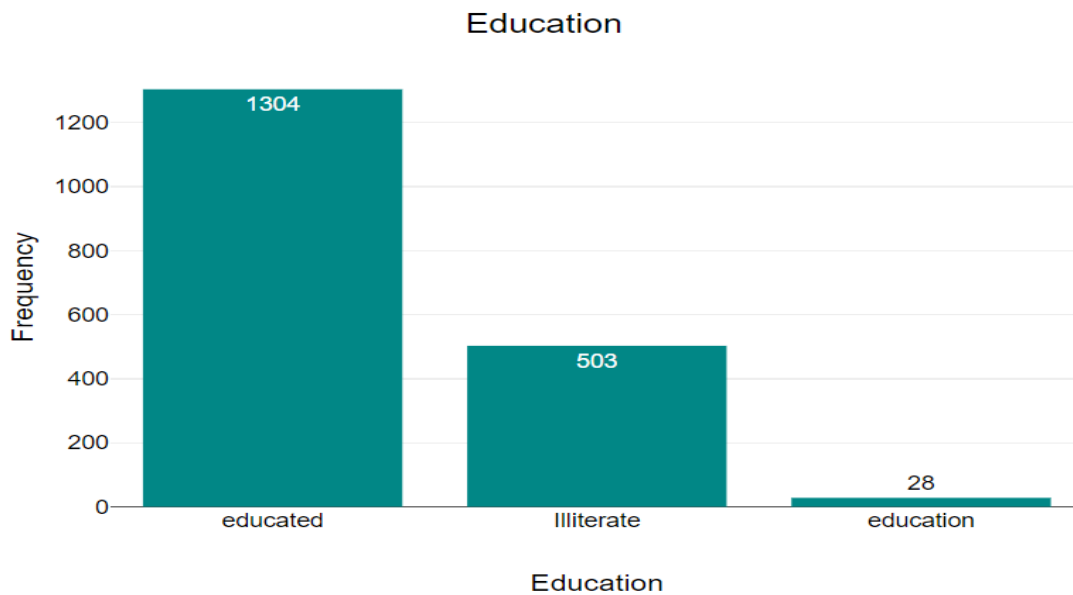
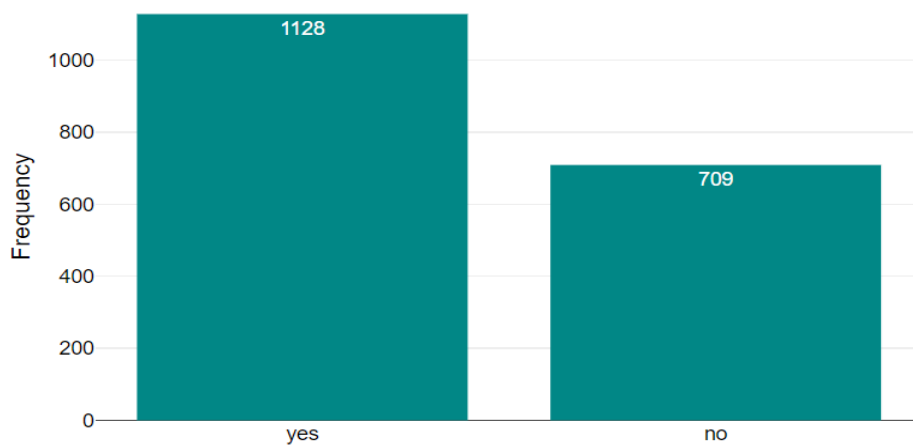


Fig. 3 shows the education status of the different participants involved in the survey.



Based on our reference, the patient knows about magical treatment [Knowledge

Fig. 4 shows the statistical analysis about the knowledge of magical treatment.

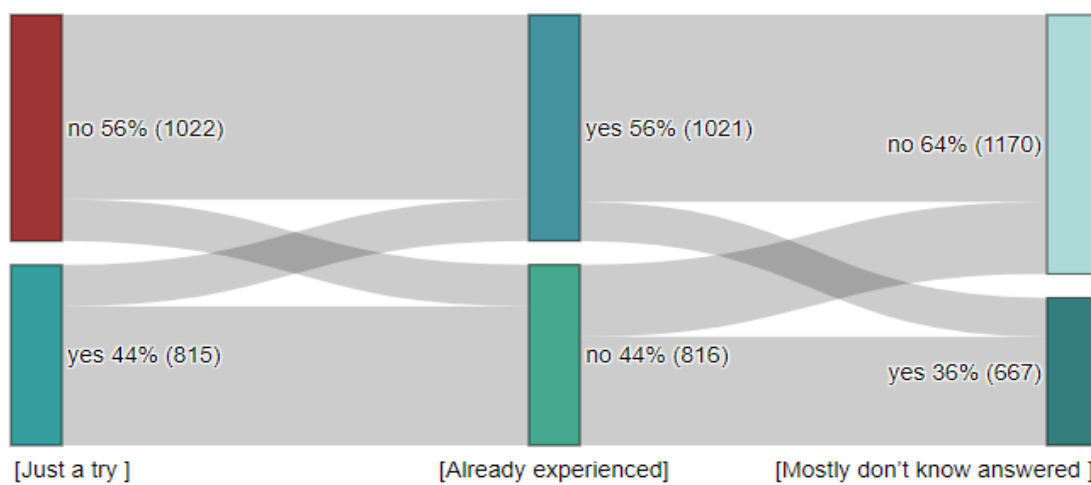


Fig 5: Frequency bar-graph of Just a try, already experienced and mostly don't know answered participants involved in the survey.

Null hypothesis (H₀): The statistical study reveals that the knowledge, attitude, perception, and practice of the participants have no relation to the magical remedy used for treating asthma.

Alternative hypothesis (H₁): The statistical study reveals that the knowledge, attitude, perception, and practice of the participants have a relation to the magical remedy used for treating asthma.

Table 1:

1. One-way ANOVA:

Source	Degree of freedom	Sum of square	Mean square	F-statistics	P-value
Groups (between groups)	17	4709.5091	277.0299	965.3977	7.772e ⁻¹⁶
Error (within groups)	33045	9482.5733	0.287		
Total	33062	14192.0824	0.4293		

One-Way ANOVA Test, using F distribution degree of freedom (17, 33045) (right-tailed):

Our study indicates that the average of at least one group is statistically distinct from the averages of the other groups. We arrived at this result by rejecting the null hypothesis (H₀) due to the p-value being lower than the selected significance threshold (α). Put, the observed disparities between specific group means are too significant to be ascribed to mere chance. The p-value of 7.77×10^{-16} (about 7.8×10^{-16}) is very less. This suggests a very low likelihood (almost 0%) of erroneously rejecting a valid null hypothesis (type I error). A smaller p-value indicates a higher level of evidence against the null hypothesis and more support

for the alternative hypothesis (H₁). The F-statistic (965.397711) exceeds the threshold normally used to determine that there is no meaningful difference (0 to 1.6231 in this situation). This further strengthens our refusal to accept the null hypothesis. The measured effect size (f) of 0.7 suggests a substantial disparity between the group means. This magnitude is regarded as significant. In addition, the η^2 value of 0.33 indicates that 33.2% of the variability in the data can be accounted for by the group membership, similar to how R² explains variance in linear regression.

Table 2:

1. Levene's test verification:

Source	Degree of freedom	Sum of square	Mean square	F-statistic	P-value
Groups (between groups)	17	630.3041	37.0767	143.3772	1.332e ⁻¹⁵
Error (within groups)	33045	8545.2887	0.2586		
Total	33062	9175.5928	0.2775		

Analysis and Interpretation:

Our data indicates a significant statistical difference in variances among some groups. We reached this conclusion by rejecting the null hypothesis (H₀) based on a p-value of 1.33×10^{-15} , which indicates a very low probability of obtaining the observed results by chance. The p-value suggests an extremely low probability of randomly discovering such differences. Put, the groups show notable differences in the distribution of their data. The p-value of 1.33×10^{-15} indicates strong evidence against the null hypothesis (H₀) of equal variances across groups. This provides substantial evidence in favour of the alternative hypothesis (H₁) that the variances are really different. The computed F-statistic (143.377244) significantly exceeds the range generally associated with no meaningful difference (0 to 1.6231). The high F-value strengthens our rejection of the null hypothesis and

affirms considerable variations in variances across the groups. The effect size (f) observed, which is 0.27, is classified as medium. Although it indicates a discernible disparity in variances across the groups, the extent of the difference could be more significant. The η^2 (Eta Squared) value of 0.069 suggests that about 6.9% of the overall variation may be attributed to the differences between group variances. This corresponds to a substantial but modest proportion, analogous to how R² in linear regression elucidates the amount of variability explained by the model. In summary, Levene's test results indicate that there are significant differences in the variances of the groups being compared. The rejection of H₀, the very small p-value, the high F-statistic, and the medium effect size all point to the conclusion that not all groups have equal variances.

DISCUSSION:

Asthma, a persistent inflammatory respiratory disorder, poses considerable difficulties in its management [9]. Although bronchodilators and corticosteroids provide temporary relief from symptoms, they have several limitations such as possible adverse effects and inability to modify the illness [9]. This underscores the need for novel treatment methodologies. Herbal remedies show potential for effectively addressing chronic illnesses such as asthma [9]. Curcumin, a biologically active chemical included in turmeric (*Curcuma longa*), has been identified as a promising candidate because of its wide range of medicinal effects [10]. Research has shown that it has anti-inflammatory and antioxidant properties, which may have positive effects on asthma [10]. The mechanisms of curcumin include the suppression of inflammation. Studies indicate that curcumin's ability to reduce inflammation is achieved via many methods [10]. It has the potential to hinder the creation of chemicals that cause inflammation, such as iNOS and free radicals. Additionally, it can block the activation of NF- κ B and AP-1 pathways, which are implicated in inflammation [10]. In addition, curcumin may reduce the levels of pro-inflammatory cytokines (IL-2, IL-5, GM-CSF) and prevent the release of histamine from mast cells, hence enhancing its anti-inflammatory properties [10, 11]. Although curcumin has shown promising benefits in asthma models in animal research [10], there is still a lack of extensive human trials [9]. Kobayashi et al. provided evidence of curcumin's capacity to inhibit the production of inflammatory chemicals in white blood cells from asthmatic patients in response to allergens [11]. These findings indicate that curcumin may have the potential to regulate cytokine production, eosinophil activity, and IgE generation, thereby potentially aiding in the management of allergic asthma [12]. Nevertheless, further human research is required to validate these results [13][14]. Turmeric, a botanical species native to the tropical regions of South Asia, has a longstanding history of use in the field of medicine. Turmeric is traditionally used in culinary preparations such as curry, and research indicates that frequent consumption of curry may have potential benefits for those with asthma [15].

CONCLUSION:

This research examined the public's opinion and possible advantages of "Fish Prasadam," a traditional asthma cure that entails the insertion of a confidential herbal combination into a fish. The research did not directly assess the effectiveness of the fish treatment, but instead used statistical techniques to examine survey data from 1837 participants. The findings demonstrated substantial statistical differences between the groups (p -value < 0.001), indicating that these changes are unlikely to be attributed to random chance. Therefore, additional inquiry into the KAP

(knowledge, attitude, and practices) related to this traditional asthma therapy is warranted.

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