



ANALYSIS OF PATIENTS FOOTFALL IN SIDDHA DISEASE PREVENTION AND PUBLIC HEALTH OUT PATIENT DEPARTMENT

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Abstract

Background: *Noi Anuga Vidhi Ozhukkam (NAVO)* is an outpatient department functioning mainly on providing dietary regimens and lifestyle modification advice for various diseases. Understanding the disease footfall among patients referred from different departments helps identify common disease patterns and their Siddha perspectives.

Objective: To document and analyze the disease footfall of patients referred from various outpatient departments visiting the *Noi Anuga Vidhi Ozhukkam (NAVO)* outpatient department.

Methods: Patients diagnosed and referred from various outpatient departments attended the *NAVO* OPD at the National Institute of Siddha, Tambaram Sanatorium, Chennai. The department primarily provides dietary regimens and lifestyle modification advice. Disease footfall was analyzed over an 8-month period from July 2024 to February 2025. Major diseases analyzed included *Madhumegam* (Diabetes mellitus), *Keelvayu* (Arthritis), *Pithapaikal* (Cholelithiasis), *Azhalkeelvayu* (Osteoarthritis), *Gunmam* (Gastric/Peptic ulcer), *Thandagavadham* (Lumbar spondylosis), *Athithoolam* (Obesity), *Vali Azhal Keel Vaayu* (Rheumatoid arthritis), and *Moolam* (Haemorrhoids).

Results: Diabetes mellitus, arthritis, obesity, gastrointestinal disorders, musculoskeletal disorders, and haemorrhoids constituted the major disease footfall observed during the study period. In Siddha concept, health is maintained by the equilibrium of the three humors (*Mukkutram*)—*Vatham*, *Pitham*, and *Kabam*. Seasonal variations (*Paruvangal*) directly influence these humors, and their imbalance predisposes the body to specific diseases. Siddha recognizes six Tamil seasons (*Aaru Paruvangal*), each affecting the accumulation, aggravation, or pacification of humors.

Conclusion: The study highlights the disease pattern among patients attending *NAVO* OPD and emphasizes the importance of Siddha concepts, dietary regimens, lifestyle modifications, and seasonal influences in disease prevention and management.

Introduction:

Siddha is a traditional Indian medical System originated from Dravidian civilization. This system has been practiced since 5000 years. The word Siddha comes from “*Siddhi*” which means “blissful state”. *Agasthiyar* is considered as the father of Siddha medicine. The Core of Siddha System is mainly based on *Andapindathathuvam*, 96 *thathuvam* and *Panchaboorthathathuvam*. This system of medicine mainly depends on *Thathu* (Metals and Minerals), *Thaavara* (Medicinal Plants) and

Jeevam (Animal products) for the preparation of medicine. Siddha system of medicine insists “Prevention is better than cure”. Siddha mainly focus on prevention of diseases rather than curing diseases. Siddha is not only a medical science but also a complete science of life, which deals with health promotion, prevention and management of diseases. Siddha system of medicine follows the holistic approach for the management of diseases. Moreover this system emphasizes on restoration of three humors. *Noi anugavidhi ozhukkam* (NAVO) constitutes a set of core principles and disciplines that guides to prevent the diseases and improve the health of people. Department of *Noi anugavidhi ozhukkam* advice Food based dietary regimen as per the present guidelines of World Health Organization based on the condition of the disease, age of the patient, nature of work of an individual and also suggests suitable lifestyle modification. By following the dietary regimen in a precise manner prevents further complications of disease that attributes towards overall promotion of public health thereby this *Noi anugavidhi ozhukkam* department naturally showed its impact over the quality improvement process of healthcare organizations with no health disparities and promotes health equity to all. This article mainly focused to analyze the disease footfall of patients attending *Noi anugavidhi ozhukkam* out patient department documented for a period of 8 months.

Materials and methods:

Table: 1 Six Tamil Seasons with imbalance of humors related with footfall of diseases

Six Tamil Seasons	Imbalance of three humors	Disease predisposition	Recorded footfall of diseases
<i>Kaar Kaalam</i> Aug 16th – Oct 15th	<i>Vatham</i> ↑↑ <i>Pitham</i> ↑	Rheumatism, infections	Rheumatism, Diabetes, Cholelithiasis
<i>Koothir Kaalam</i> Oct 16th – Dec 15th	<i>Kabam</i> ↑	Respiratory disorders	Infections
<i>Munpanikalam Kaalam</i> Dec 16th – Feb 15th	<i>Kabam</i> ↑↑	Obesity, asthma	Obesity, Cholelithiasis, Digestive issues
<i>Pinpanikalam</i> Feb 16th – Apr 15th	<i>Kabam</i> ↓ <i>Pitham</i> ↑	Skin & digestive issues	Cholelithiasis, Obesity
<i>Ilavenil Kaalam</i> Apr 16th – June 15th	<i>Pitham</i> ↑	Skin & gastric disorders	Footfall of diseases not recorded
<i>Muduvenil Kaalam</i> June 16th – Aug 15 th	<i>Vatham</i> ↑	Joint & nervous disorders	Joint disorders, Obesity

Note: ↑- Humor Deranged/Increased, ↑↑- Humor Aggravated, ↓- Humor Decreased

Patients were diagnosed and referred to *Noi anugavidhi ozhukkam*(NAVO) outpatient department from various other outpatient departments (OPD). This NAVO OPD is purely functioning on providing dietary regimen and advice lifestyle modification for numerous diseases for the people referred from various departments attending the OPD room no9. Analysis were done for the main footfall of diseases like Diabetes, Arthritis, Cholelithiasis, Osteoarthritis, Gastric / Peptic ulcer, Lumbar spondylosis, Obesity, Rheumatoid arthritis and Haemorrhoids during the period of 8 months from July 2024 to February 2025 at National Institute of Siddha, Tambaram Sanatorium, Chennai.

Madhumegam (Diabetes mellitus) is a group of metabolic disorder characterized by impaired Insulin secretion and variable degrees of peripheral insulin resistance leading to hyperglycemia.

Keelvayu(Arthritis)is nothing but increased pain and swelling over the (major joints) joints, especially Hip and Knee Joint. *Vatham* gets stagnated in the joint which combines with *Kabam* to cause Arthritis.

Pithapaikal(Cholelithiasis)is a solid mass of cholesterol, accumulated with bile salts and pigments, in various sizes in Gall bladder due to increased fat content and secretion of excess bile.

Azhalkeel vayu (Osteo Arthritis) is defined as a gradual degeneration of articular cartilage, Combined with thickening of the sub chondral bone, bony outgrowth (Osteophytes) at joint margins & mild / chronic non-specific synovial Inflammation. It is a chronic progressive degenerative disease affecting mainly the weight bearing joints of the body mainly knee joints in old aged Individuals.

Gunmam (Gastritis/Stomach ulcer) is a disease occurs majorly in males than females. Due to lifestyle changes in men like overnight work, eating spicy food and eating food at an altered time and disturbances in the sleep cycle which affect the Circadian Rhythm and excessive stress that leads to *Gunmam*.

Duodenal Ulcer is common in middle aged people (30 – 50 years of age) especially in male due to their lifestyle and behavior. Peptic Ulcer is common in old aged people (>60 years of age) due to increase in certain medications such as Non Steroidal Anti-inflammatory Drugs.

Thandagavadham (Lumbar Spondylosis) is a disease associated with vertebral column and spinal cord, characterized by pain and stiffness radiating to the lower extremities associated with the restriction of movements, heaviness and numbness, pricking sensation and loss of function.

Athithoolam (Obesity) is a condition characterized by the excessive accumulation and storage of fat in the adipose tissues of the body with increased Body Mass Index (BMI).

$BMI = \text{Weight in kg} / \text{Height in meters}^2$

Normal range = 20 to 25 kg/m²

Obesity is more common in women than in men due to Hormonal difference and metabolic rate (women generally have a lower resting metabolic rate than men due to difference in muscle mass which can make it easier to gain weight). In this *Athithoolam* (Obesity) disease, the primarily deranged humor was *kabam* which is increased so that *vatham* humor is deranged.

Vali azhal keel vaayu (Rheumatoid arthritis) is the chronic inflammatory arthritis which mainly affects major joints and minor joints associated with pain, swelling, early morning stiffness and restricted movements that lead to deformity of bones. It is also a systemic disease that potentially affects the internal organs of the body and leads to disability. Rheumatoid arthritis is more common in females due to combination of factors including hormonal fluctuation, genetic predisposition and difference in the immune system (women are more prone to autoimmune disease in general).

Moolam (Piles/Hemorrhoids) is defined as swollen or inflamed veins located at / distal to the pectinate line of anal region covered by anodermal epithelium or skin. In Siddha aspect, *Veli moolam* (External piles) is caused by the derangement of Abanan characterised by varying degrees of pain with palpable mass, burning sensation, itching in and around the anus and difficulty in passing stool. The primarily affected humors in piles are *vatham* and *pitham* in aggravated state of condition.

Results:

In Siddha concept, health is maintained by the equilibrium of three humors (Mukkutram)—*Vatham*, *Pitham*, and *Kabam*. Seasonal variations (*Paruvangal*) have a direct influence over these humors, and due to their imbalance of humors predisposing the body to specific diseases.

Siddha recognizes six *Tamil* seasons (*Aaru Paruvangal*). Each season causes accumulation, aggravation, or pacification of a particular humor.

***Madhumegam* (Non Insulin Dependent Diabetes):**

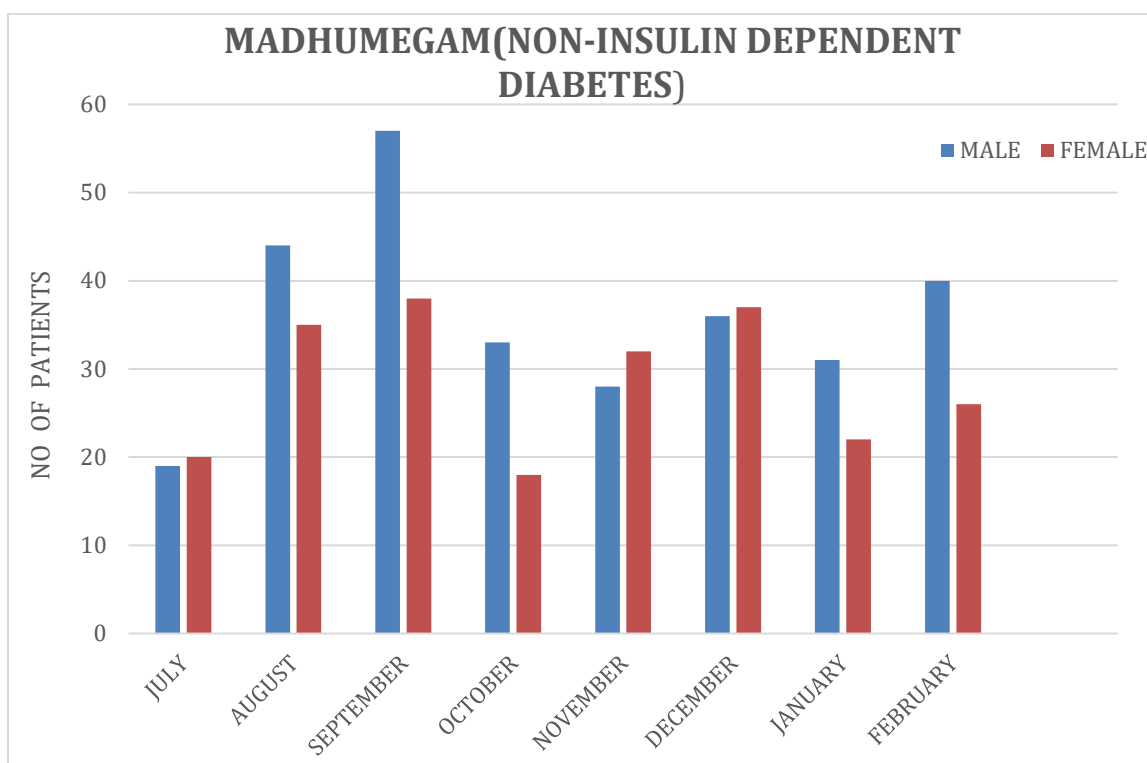


Figure1: Footfall of *Madhumegam*(Diabetes –NIDDM)cases month wise

The foot fall of *Madhumegam* patients were higher in September. From the figure1 the rise in the footfall of *Madhumegam* is more in the September month. Comparatively male cases were recorded more than female cases.

***Keel vayu* (Arthritis due to various causes):**

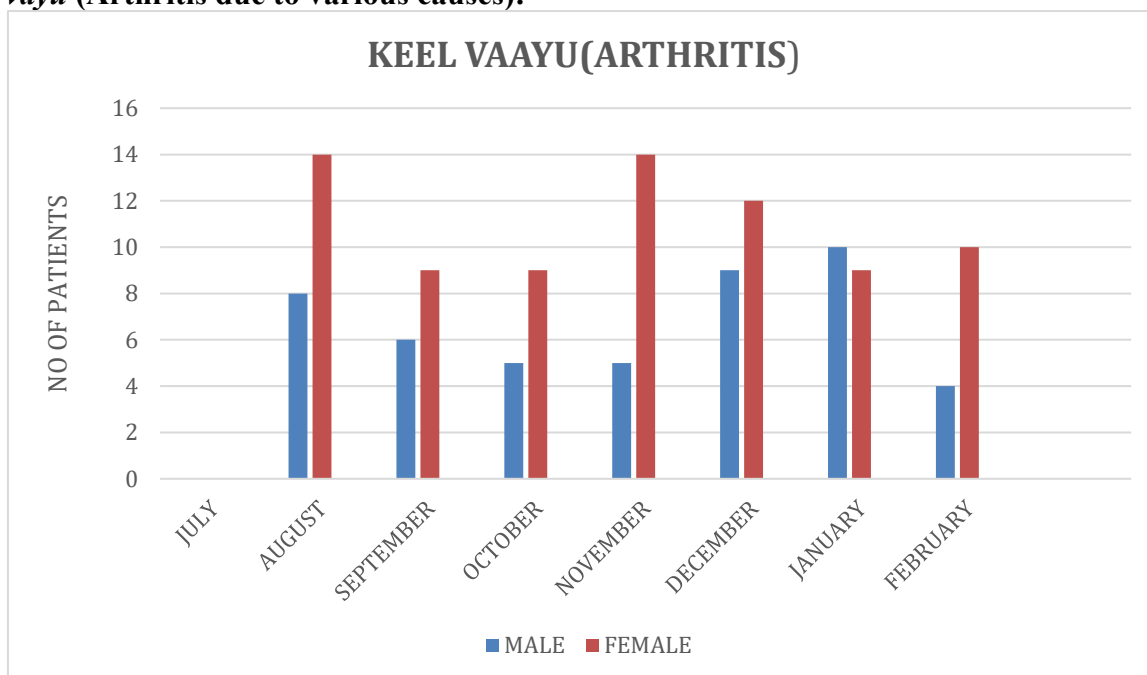
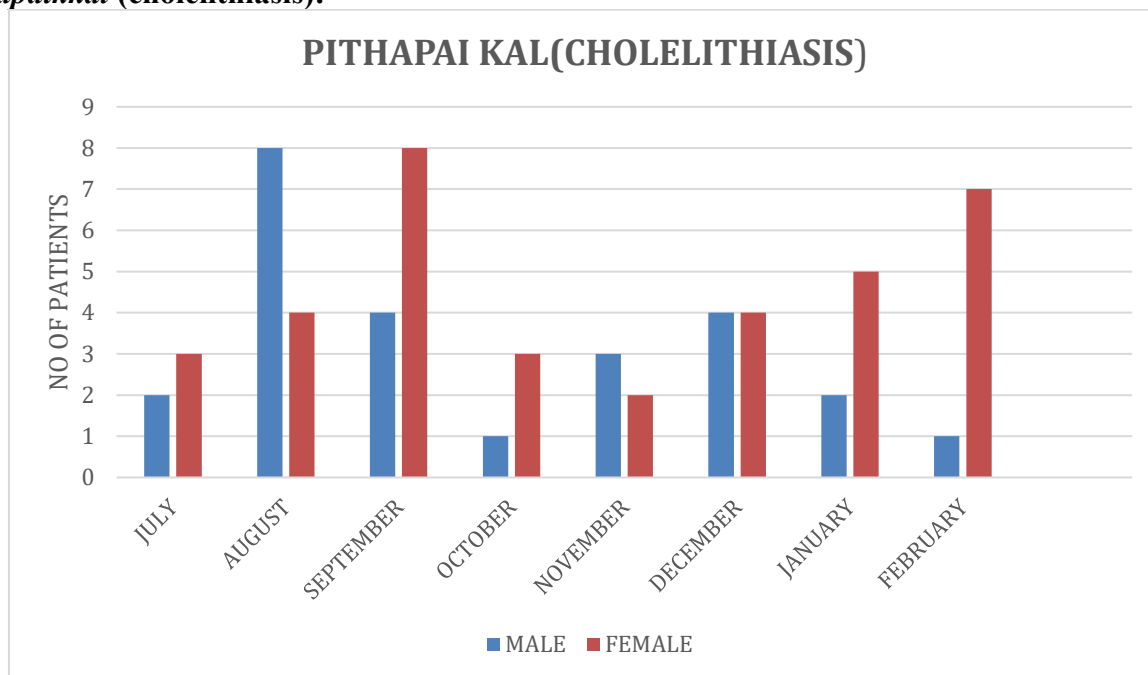
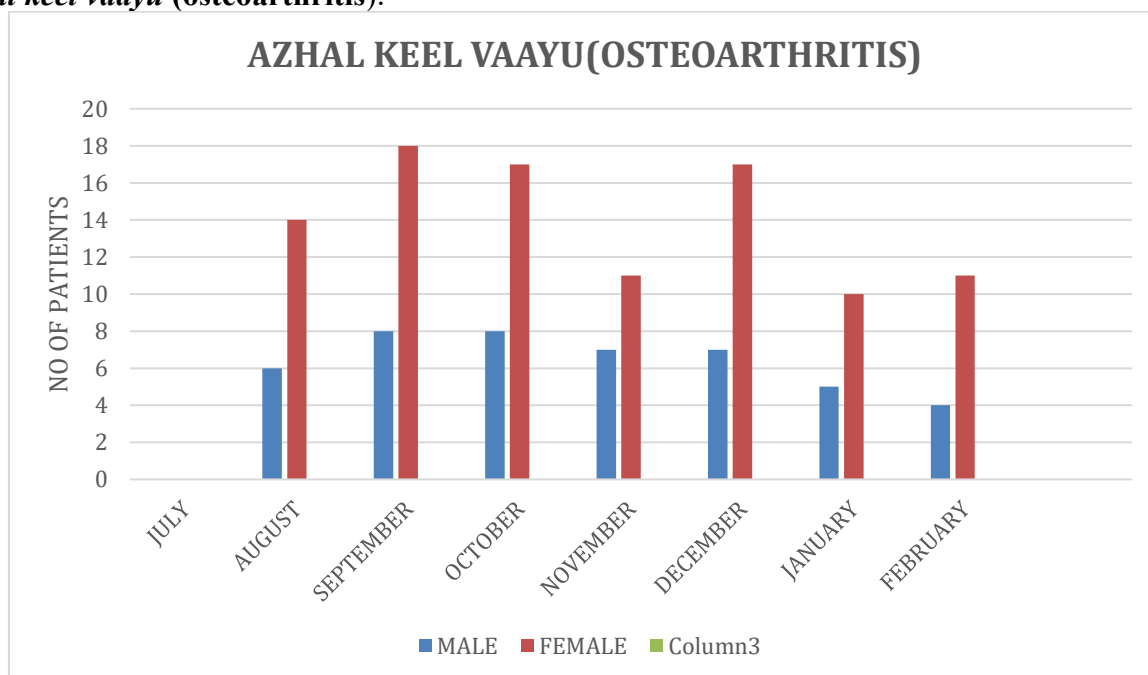


Figure2: Footfall of *Keelvayu* (Arthritis) cases month wise

From the above table the incidence of this disease was in the peak during August and in November-January. This is because as per Siddha System, *Kabam* humor gets deranged and the *Vatham* humor got increased. The incidence of Arthritis was prevalent also in males in the month of December and January.

Pithapaikkal (cholelithiasis):**Figure3: Footfall of Pithapaikkal(Cholelithiasis) cases month wise**

The foot fall of patient having *Pithapaikkal* was in peak during the month of August in females and peak in the month of September in males. It is most commonly seen in middle aged group especially in fertile women due increased estrogen and progesterone level.

Azhal keel vaayu (osteoarthritis):**Figure4: Footfall of Azhal keel vaayu (Osteoarthritis) cases month wise**

The Foot Fall of patients with the Osteoarthritis was increased during the period of August to December because during this period the *pitham* humor showed increased in state of condition and *vatham* humor got deranged from August to December.

Gunmam(gastric disorder/ peptic ulcer)

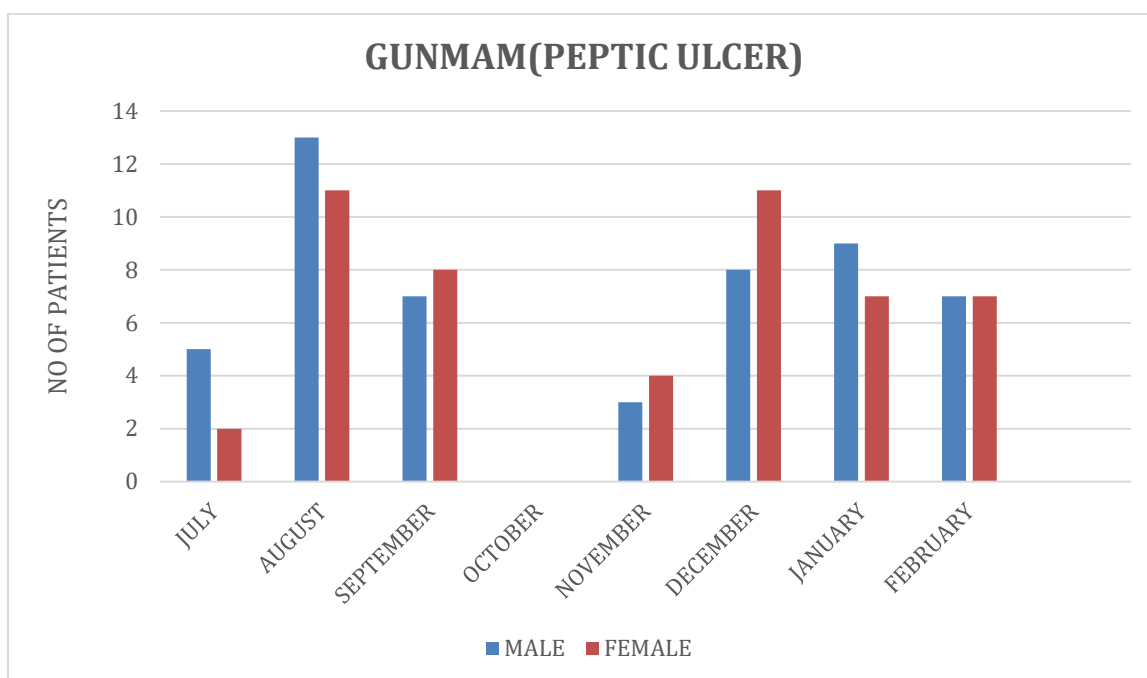


Figure5: Footfall of *Gunmam*(Gastric /Peptic ulcer)cases month wise

Results

The Foot Fall of the patients with *Gunmam* elevated during August, September, December and January months. Prevalence of male *Gunmam* cases were recorded in the month of August and female *Gunmam* cases were recorded in the month of August and December.

Thandagavatham (Lumbar spondylosis):

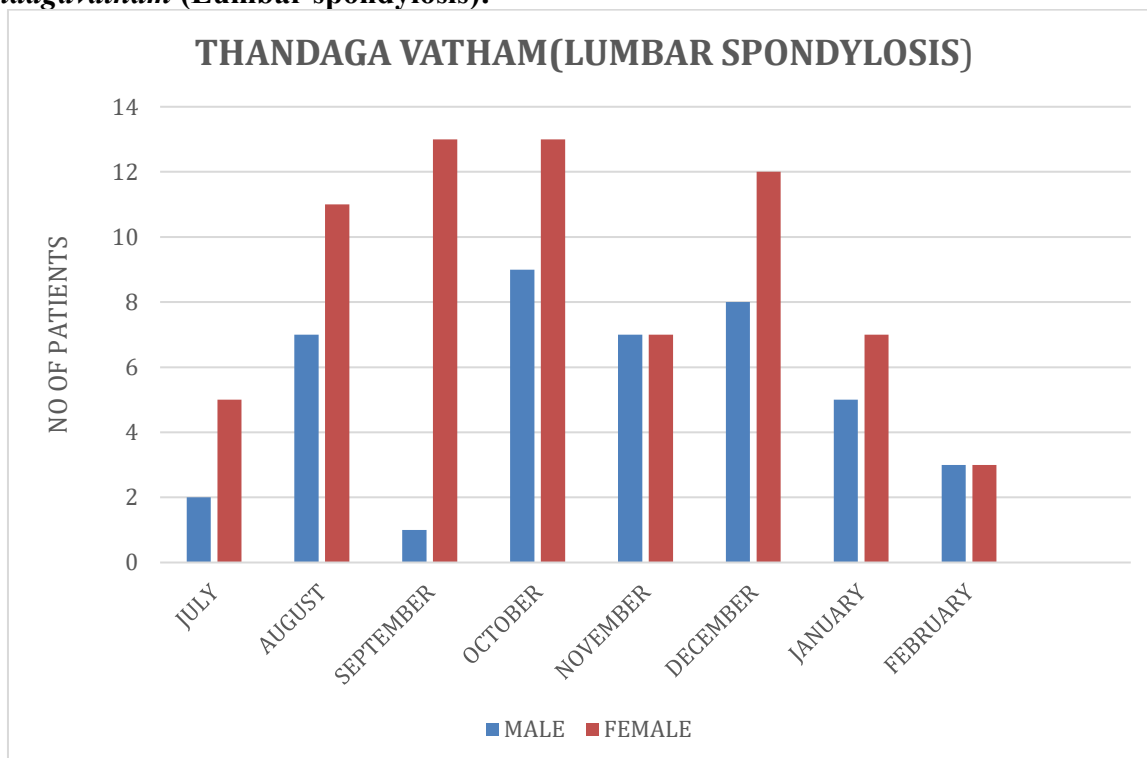
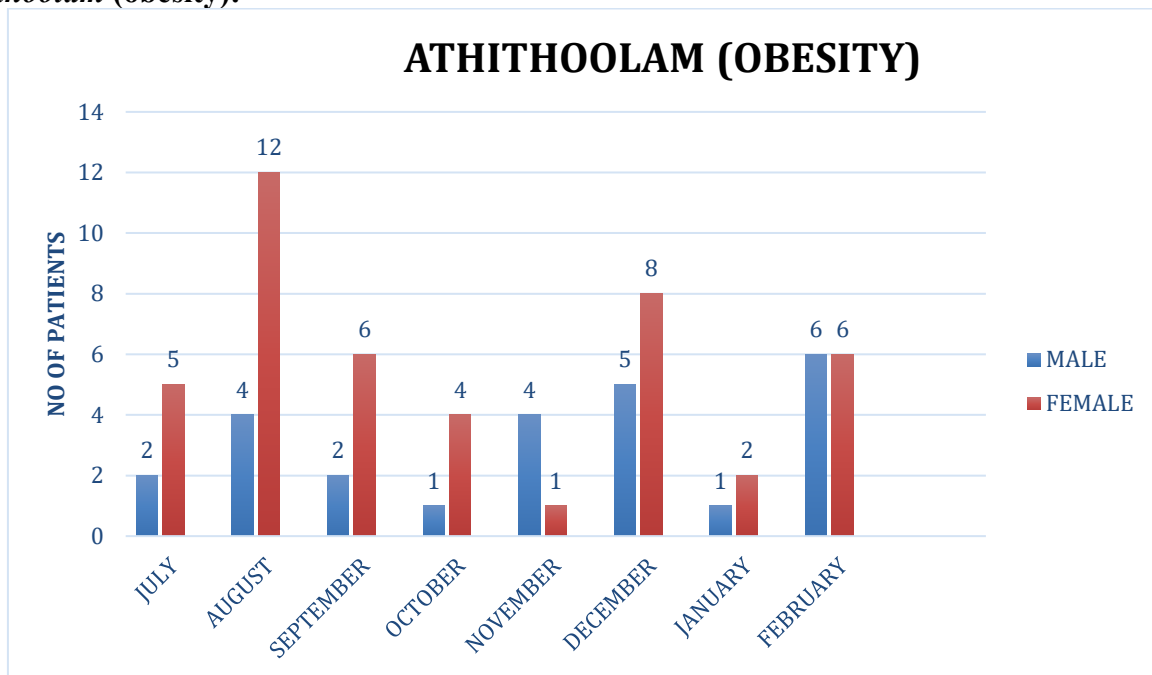


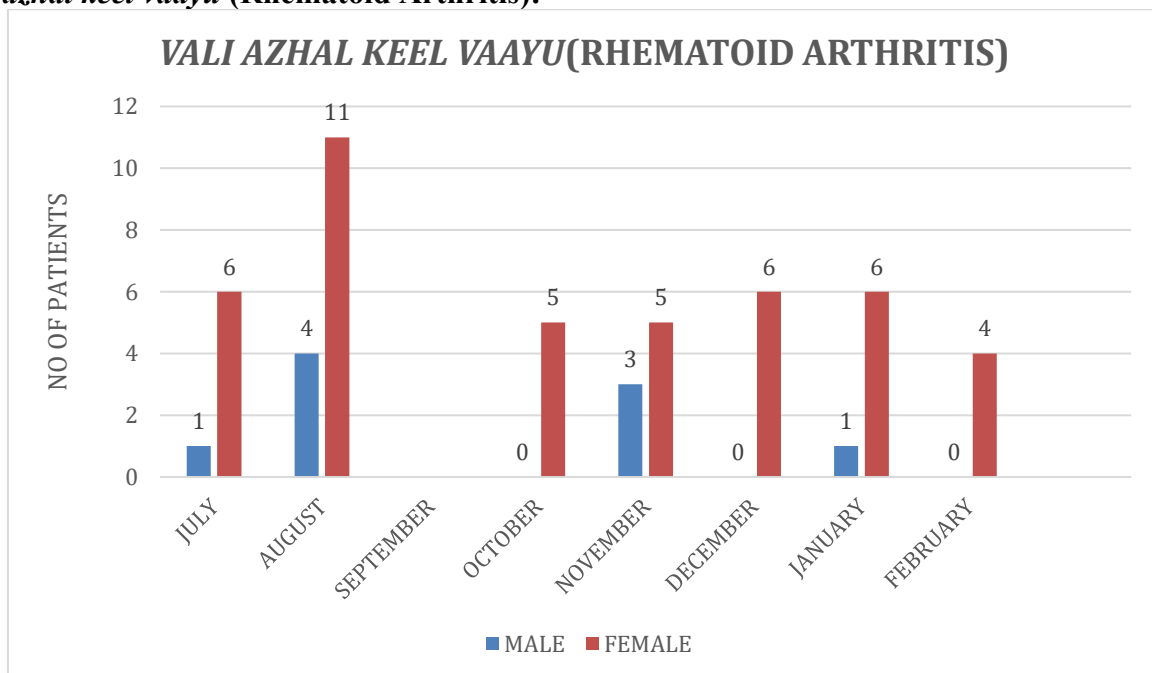
Figure6: Footfall of *Thandagavatham*(Lumbar spondylosis) cases month wise

The Foot Fall of the patients having *Thandagavatham* (Lumbar spondylosis) was in peak during the month of August to December. Females were more affected with Lumbar spondylosis than males from the above bar chart.

Athithoolam (obesity):**Figure7: Footfall of Athithoolam (Obesity) cases month wise**

As the case inflow was peak during August month (*kaarkalam*) in which the *pitha* humor was in increased state and *vatham* humor showed decreased in its state and thereafter *kabam* got increased. Due to this reason we can say the *Athithoolam* cases were more in the *kaarkalam* season.

As per the analytical reports, the disease majorly occurs in females in the age group of (30-50 years of age) might be due to the hormonal changes thereby fat got accumulated in the adipose tissues.

Vali azhal keel vaayu (Rheumatoid Arthritis):**Figure8: Footfall of Vali azhal keelvaayu(Rheumatoid Arthritis) cases month wise**

In this *vazhi azhal keel vaayu* disease, the primary deranged humor was *vatham* and *pitham*.

In *muduvenkilkaalam*, *vatha* humor will be in increased state of condition. Hence this was the cause of *Vali azhal keel vaayu* cases that were recorded more in *muduvenkilkaalam*.

The disease majorly occurs in middle aged people due to immunosenescence which can increase the risk of developing autoimmune diseases like rheumatoid arthritis.

Moolam (hemorrhoids):

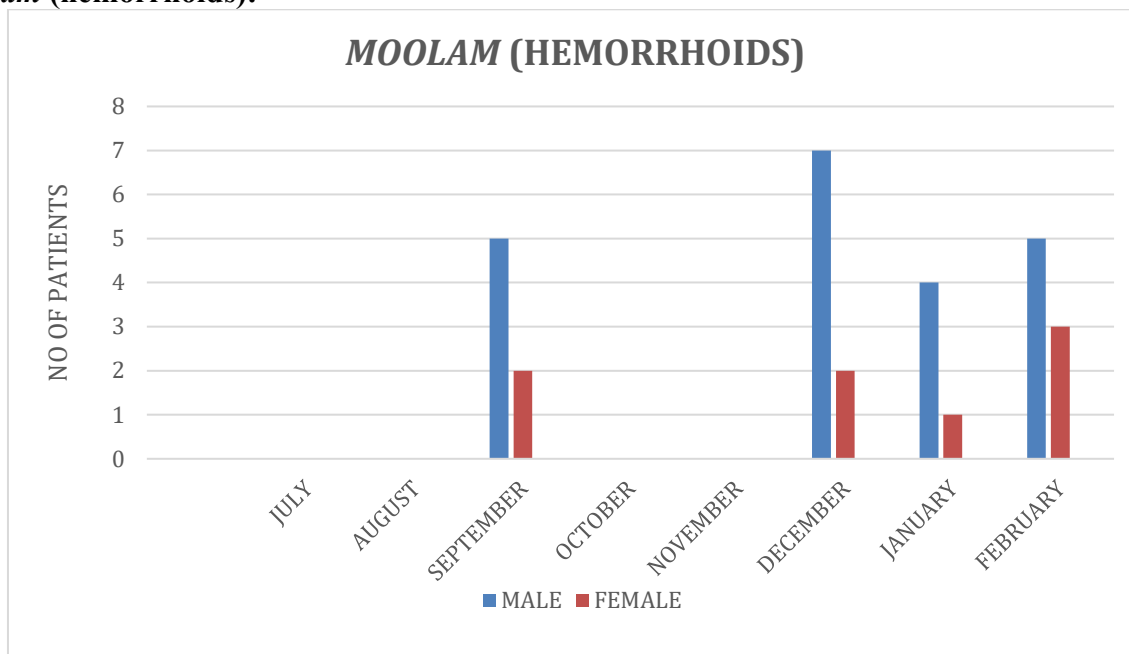


Figure9: Footfall of Moolam (Hemorrhoids) cases month wise

The footfall of *Moolam* cases were peak during September and December to February. Because during this season (*kaarkalam, munpanikaalam*) *pitha* humor was in profound state whereas another humor *vatham* also got deranged reported in *Moolam* cases. It is common in middle aged people.

This is proved by the fact that *vatham* disease is more frequent in *Muduvani Kaalam*, *Azhal* diseases were seen more in *Kaar Kaalam* whereas *Pinpanikaalam* recorded more *lyya* diseases. This pattern is purely correlated in accordance with the ancient Siddha medical treatises. From the above table, the disease predisposition and footfall of diseases recorded were correlated with mild additional diseases in two seasons which could be due the sedentary lifestyle and consumption of junk foods and reduced immune level since not having the capability to face the issues of seasonal variations.

Discussion

Madhumegam patients were higher in September. According to *Noi illaneri* Siddha text, *Pitham* humour increases during the period of *Kaar kalam*, which falls under the Tamil season termed as *Avani* and *Purataasi*. As per Siddha aspect, *Madhumegam* is caused due to the derangement of *Pitham* humour. This might be one of the reasons for the increased case flow of Diabetes mellitus in the month of September. The increase in the number of diabetes cases in males could be due to increased deposition of visceral fat in the abdomen, which corresponds to insulin resistance. Siddha concepts deliberately insisted therapeutic purgation and vomiting to neutralize *Vatham* and *Pitham* humour, thereby preventing the complications of the disease.

The predominance of *Keelvayu* was seen more in women aged over 50 because the hip region has increased muscle and fat than in males. Occurrence of *Keelvayu* is common in females due to hormonal changes in December and January months, included in the early winter season. In this winter season, normally the body heat increases to manage the cold weather. In this season, the calories of food consumed will be utilized to increase the body temperature. But naturally in this season *Pitham* is in a reduced state. Hence, more food should be consumed to maintain body temperature, increase appetite and vice versa. If sufficient food is not taken, metabolism occurs by utilizing energy from body tissues and the body becomes depleted with synovial fluids of the joints. This might be one of the reasons for increased cases of Arthritis during this season. Siddha concepts

included therapeutic purgation and *Nasiyam/Kalikkam* to neutralize *Vatham* and *Kabam* humour, thereby reducing complications of the disease.

During this period the *Pitham* humour got aggravated, along with derangement of *Vatham*. Preferable diet hot and easily digestible food to enhance absorption of food particles. During this season, if one eats more fatty food, it can be stored as triglycerides in the liver. More probability prevails for the formation of gallstones during this season. Middle-aged females showed increased Cholelithiasis, especially fertile women, which might be due to fluctuations in estrogen and progesterone levels. Hence females should follow seasonal dietary regimens strictly for prevention of such diseases. Sudden seasonal variations and fluctuations might be one of the reasons for Cholelithiasis.

Comparatively females are more prone to Osteoarthritis than males. It is very common in women above 50 years of age due to hormonal imbalance. Bar diagram showed the footfall of Osteoarthritis hike seen in females in September, October, December, and August in descending order. *Pitham* humour was increased and *Vatham* humour got aggravated in September and December months and vice versa between these months, thus illustrating the increase in patient footfall with Osteoarthritis. Derangement of *Vatham* humour provokes symptoms like pain and stiffness over knee joints. Also, comorbid conditions like obesity play a major role in Osteoarthritis among females. Hence more prevalence of Osteoarthritis cases was seen during this season.

Vaatha and *Pitha* humour derangement results in *Gunmam*. *Pitha* humour predominates *Vaatha*, which is the cause for Gastric and Peptic ulcer. *Gunmam* is a disease affecting both body and mind, characterized by indigestion, heartburn, vomiting, weakness, emaciation, depression, gaseous formation, dyspepsia, abdominal discomfort, or gastritis. *Gunmam* occurs majorly in males than females due to lifestyle changes like overnight work, eating spicy food, altered food timings, hotel food consumption, and sleep cycle disturbances affecting circadian rhythm, leading to Gastric/Peptic ulcer.

Thandagavadham is a disease of the vertebral column and spinal cord, characterized by pain and stiffness radiating to lower extremities associated with restriction of movements, heaviness, numbness, pricking sensation, and loss of function. The footfall of patients with *Thandagavadham* was peak during August to December because *Vatham* and *Pitham* got deranged during this period. The disease majorly occurs in females (>50 years) due to fat accumulation in the hip region and hormonal imbalance. Increased Lumbar spondylosis cases are mainly due to sedentary lifestyle habits seen in majority of females.

Obesity, a non-communicable disease, showed increased case flow in *Kaarkalam* and *Mudhuvenilkaalam*. In the bar diagram chart, *Athithoolam* cases were recorded in August, which falls under *Kaarkalam* and *Mudhuvenilkaalam*. During these seasons *Kabam* increased. Female obesity cases were recorded more than males. Imbalance in all three humours is the main cause for obesity affecting carbohydrate and fat metabolism. Increased body weight during this season might be due to increased basal metabolic rate provoking appetite and inducing increased food intake. Body fat mass was found to be higher in winter when temperature is low, whereas lower fat mass was observed during summer climate. Obesity is linked with co-morbidities like hypertension, cardiac disease, fatty liver, and polycystic ovarian disease.

Rheumatoid arthritis is more common in females due to hormonal fluctuations, genetic predisposition, and differences in the immune system. Women are more prone to autoimmune diseases in general. It is a systemic disease potentially affecting internal organs and leading to disability. Normally in *Mudhuvenilkaalam*, *Vatha* humour is in an increased state. In *Kaarkalam*, *Vatha* humour becomes aggravated. Hence this might be the cause of footfall of *Vali Azhal Keel Vaayu* cases in *Mudhuvenilkaalam* and *Kaarkalam*. In this *Vali Azhal Keel Vaayu* disease, the primary deranged humours were *Vatham* and *Pitham*. Hence during these Tamil seasons aggravation of *Vatham* worsens Rheumatoid arthritis symptoms.

During *Kaarkalam* and *Munpanikaalam*, *Pitha* humour normally increases while *Vatham* also becomes deranged, as reported in *Moolam* cases. It is more common in people with weakened supporting tissues, increased pressure in the anal region, increased spicy food intake, reduced fibre

and fruit intake, and environmental and lifestyle changes. Usually in early rainy and early winter seasons, earth temperature increases aggravating symptoms of *Moolam* (Hemorrhoids). According to Siddha medicine, tastes and humours are interrelated. During early rainy season, among *Arusuvai* (six tastes), sour taste becomes activated and has a direct association with elevating *Vatham* humour. Hence more *Moolam* cases were recorded during this season.

Conclusion

Principles of Siddha system of medicine aims on prevention of diseases rather than curing the diseases. Department of *Noi anugavidhi ozhukkam* mainly focuses to explore the Siddha principles and disciplines for the prevention and promotion of diseases stated in Siddha texts for promotion of public health. In future every individual should follow the Siddha seasonal dietary regimen for the prevention and promotion of diseases and thereby can combat the sprouting and antibiotic resistant diseases.

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