

EVALUATION OF NAADI PERCEPTION IN THE DIAGNOSIS OF REGIONAL PATHOLOGICAL CONDITIONS



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DECLARATION BY THE CANDIDATE

I hereby declare that this Dissertation entitled “*Evaluation Of Naadi Perception In The Diagnosis Of Regional Pathological Conditions*” is a bonafide and genuine research work carried out by me under the guidance of **DR. S. ELANSEKARAN M.D(S), Ph.D,** Associate Professor, Department of Noi naadal, National Institute of Siddha, Chennai-47, and the dissertation has not formed the basis for the award of any degree, Diploma, Fellowship or other similar title.

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BONAFIDE CERTIFICATE

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1. INTRODUCTION

Siddha system is an ancient healing science created and developed through the wisdom of *Siddhars*, the great scientists, genius spiritual faculties and pioneers in this field with supernatural powers. They realized that the body is the only instrument for attaining the highest goal of life, the salvation and so invented medicines and other methods for the longevity of life. This essence of life is an elixir to the mankind to strengthen health. It is explained by the Sage *Thirumoolar* as¹

“உடம்பார் அழியில் உயிரார் அழிவர்
திடம்பட மெய்ஞானம் சேரவும் மாட்டார்
உடம்பை வளர்க்கும் உபாயம் அறிந்தே
உடம்பை வளர்த்தேன் உயிர் வளர்த்தேன்”
-திருமந்திரம்

Siddhars described 96 principles as the constituents of human being. They include anatomical, physiological, psychological and intellectual components of a person. The anatomical units are made up of five elements and seven physical constituents and physiological units of three humours, the *Vatham*, *Pitham* and *Kabam*. These three humours are nothing but the life force perceived in the ratio of 1:1/2:1/4 expansile pulsation over the radial artery during normal conditions. Such equilibrium state is called ‘*Sugarnam*’ or physiological. Any alteration either increase or decrease in this ratio is called as disease. To diagnose a disease *Siddhars* developed eight types of diagnostic tools called as “*Envagai thervu*” (Eight fold examinations).^{2,3,4,5}

“தாணியுள்ள வியாதிதன்னை யட்டாங்கத்தால்
தானறிய வேண்டுவது யேதோ வென்னில்
திரணியதோர் நாடிகண்கல் சத்தத் தோடு
தேகத்தினது பரிசம் வருணம நாக்கு
இரணமல மூத்திரமா மிவைகளெட்டும்
இதம்படவே தான்பார்த்துக் குறிப்புங் கண்டு
பரணருளால் பெரியோர்கள் பாதம் போற்றிப்
பண்பு தவறாமல் பண்டிதன் செய்வீரே”

-குணவாகட நாடி

These examination tools not only help in the diagnosis but also to assess, learn the prognosis and restoration of health. *Envagai thervu* involves mainly physical/clinical diagnosis and laboratory diagnoses. Eight diagnostic tools are *Naadi, Sparisam, Naa, Niram, Mozhi, Vizhi, Malam and Moothiram (Neerkuri and Neikkuri)*^{2,3,5,6}

Among the eight diagnostic tools *Naadi* is the most important one. It is nothing but channels which transports the *pranan*/life force throughout the body. Any derangement in the circulation of *Pranan* and its distribution results in the alteration of the equilibrium of the three humours and it can be found out through *Naadi*. So *Naadi* act as a pathfinder to all ailments in human body. *Naadi* can be read by placing three fingers over the radial artery and can be used to easily assess the conditions of the body, disease and its prognosis.²

According to *Kannusaamiyam*

“அறியவுந்தி வாதமடு பித்தந் தானும்
அறியுநடு மார்பில் வன்மை-குறிக்குமே
ஐயமுய ருச்சியண்டு நிலையாங் குணரப்
பையக் கரம்பற்றிப் பார்”

According to *yugi vaidhya chintamani 800*

“நாமென்ற வாதத்துக்கிருப் பிடமே கேளாய்
இநாபிக்குக் கீழென்று நவிலலாகும்
பேமென்ற பித்தத்துக்கிருப் பிடமே கேளாய்
பேரான கண்டத்தின் கீழ் தாகும்
தேமென்ற சேட்பமது சிறந்திருக் குந்தான்
செயலான வச்சிக்குக் கீழ் தாமே”

Vatham - Below the umbilicus

Pitham - Below the throat

Kabam - Below the vertex^{2,6}

The lifeline- *Vatham, Pitham and kabam* in their appropriate ratio is the authority of well being shows up in each and every cell in the materialistic body although, as per the *Siddhars*, there are some power points for each humour at different systems and regions of the body. Hence any alteration in the humours in these power points leads to pathological conditions of that

particular system. So any diseases prevailing in *Vatham*, *Pitham* and *Kabam* regions can be read by three fingers placed and positioned over the radial artery and thus a physician can identify the derangements of the humours and its corresponding system and region precisely by finding the location of derangements. Manifestation of a disease in a particular region is because of the alteration of humour corresponding to that area. These regional derangement of humours and its location (of the disease) can be assessed by *Naadi* examination and thus show the way to organ which is pathologically affected thus aiding in the diagnosis.^{2,7}

“நோய்நாடி நோய்முத னாடி யதுதணிக்கும்
வாய்நாடி வாய்ப்பச் செயல்”

- Thirukkural

According to *Thirukkural*, the foremost thing a physician should do is to diagnose the disease based on the history and symptoms. Then one has to identify the underlying cause of the disease and to institute proper treatment. It clearly indicates the importance of diagnosis as early diagnosis of a disease helps a physician to manage the patient with correct line of treatment. Based on this a physician can identify all the diseases. Since *Naadi* examination is unique, economical, non-invasive and painless tool, it paves the way for bedside diagnosis. *Naadi* gives vital information about the body which in turn helps the physician to diagnose, treat, prevent and cure many illnesses as early diagnosis is possible through *Naadi* examination and thereby reading the *Naadi*, quality of life can be improved.^{2,4}

This study is trying to justify the importance of *Naadi* as a diagnostic tool both in the diagnosis and prognosis of diseases with a comparative approach with all modern diagnostic tools and to familiarize the *Naadi* diagnostic method to the whole world and to use it for the benefit of the mankind.

2.1 AIM

To establish the *Naadi* based diagnosis as a cost effective investigatory tool.

2.2 OBJECTIVES

2.2 (a) Primary objective

- To carry out a blinded examinations of *Naadi* and to determine pathological conditions of particular regions of the body.

2.2 (b) Secondary objective

- To find out if any specific character in *Naadi* which may provide a clue to the diagnosis of any specific organ pathology, prognosis and complications of that pathological condition.

3. NAADI - LITERATURE REVIEW

Naadi, a higher order philosophy which is very difficult to understand and to explain. It is also called as *thathu*, the *thathu* which denotes *Vatham*, *Pitham* and *Kabam*, or the beat/pulse felt over the blood vessels. It is also denotes *Dasa Naadi*. It is known as *Aathi* (primitive), *Moolam* (origin) which means something fundamental or basics, the fundamental aspects of creation or its protection or destruction. *Thathu* also denotes the *uyir thathu* and *udal thathu*. *Uyir thathu* is compared to *Siva* the supreme soul and *moolaprakruthi*.²

“சிவனென்ன சிவனென்ன வேறில்லை”

-திருமந்திரம்

It is the force which unites the body (Udal-gross one) and the soul (Uyir-subtle one) which are separate entities during the time of creation and forms the human body.¹

It is explained as

“உருபொருள் தாங்கு முடலு முயிரும்

உடர்கா தாரமொன் பஞ்ச பூதப்

பஞ்சீகரண பான்மையா மெனவும்

உயிர்க்காதார முயிர்த்தா தெனவும்

முப்பிரிவாகி முக்குண மணுகி

உடலையு முயிரையு மோம்பிக் காத்து

வருமென முதுமறை வகுக்குந் துணிபே”

-நோய் நாடல் நோய் முதல் நாடல் திரட்டு

The above verses explain that the body is formed by the process of *pancha bootha pancheekaranam* while the soul from *uyir thathu* and it is that *uyir thathu* which unites the body and soul and sustains the life inside the body. This *uyir thathu* divides as *Vatha*, *Pitham* and *Kabam* and function as creator, protector and destructor and guards the soul and body in an

inseperable manner. These three divisions are represented by *Vayu*, *Theyu* and *Appu* and three gunams, *Sathwam*, *Rajas* and *Thamogunam*. The synonyms of Naadi are *Seevasakthi*, *Seevathma*, *Sivathathu*, *Thathu*, *Naadi*, *Seevan*, *Aanma*, *Athma naadi*, *Athma sakthi* and *Gurunaadi*.²

According to the Siddhars

“நாடி என்றால் நாடியல்ல நரம்பில் தானே

நலமாகத் துடிக்கின்ற துடிதானு மல்ல

நாடி என்றால் வாதபித்த சிலேற்பனமு மல்ல

நாடி எழுபத் தீராயிரந் தானு மல்ல

நாடி என்றால் அண்டரெண்டமெல்லாம்

நாடி எழுவகைத் தோற்றத்துள்ளாய் நின்ற

நாடியது யாராய்ந்த பார்த்தா ரானால்

நாடியுறும் பொருள் தெரிந்து நாடுவாரே”

-சதக நாடி

Naadi is not merely the arterial pulsation in the radial artery, not only mean the *vatham*, *pitham* and *kabham*, not only represents 72000 nerves/blood vessels, it represents the whole universe, the macrocosm and microcosm and seven kinds of generative process of evolution of life. Those who has the depth knowledge in these evolutionary process only knows about the real meaning of *Naadi*. So *Naadi* can be defined as the channels of life forces for the dynamics of *pranan*, the force/energy which sustains the life in the body.²

CONVERSION OF UYIR THAATHU TO THREE HUMOURS

1. “இருப்பான நாடி எழுபதோ டீரா
ஈராமான தேகத்தில் ஏலப் பெருநாடி
ஓக்கத சமத் தொழிலை யூக்கதச வாயுக்கள்
தக்கபடி யொன்றே சாரும்”
2. “சாருந்தச நாடிதன்னில் மூலம் மூன்று
பேருமிடம் பிங்கலையும் பின்னலுடன் மாறும்
உரைக்கவிரற் காற்றொட் டுணர்த்துமே நாசி
வரைச்சுழியோ மையத்தில்வந்து”
3. “வந்தகலை மூன்றில் வாயுவா மபான்றுடன்
தந்த பிராணன் சமான்னும் சந்தமுறக்
கூட்டுறவு ரேகித்தல் உறும்வாதம் பித்தம்
நாட்டுங் கபமேயாம் நாடு”
4. “நாடு மிடகலி நானான்கு அங்குலமாய்
ஓடுமேபிங்கலையு முய்யபத் தோடிரண்டு
போக நடுச் சுழியோ போற்றவு பாயமுமாய்ப்
பாகம் பகிர்ந்திடுமே பார்”
5. “பாருங் கலை மூன்றில் பற்றிய வாயு மூன்று
சாரும் வன்மைக்குறையான் சாற்றக்கேள்- தேருமதின்
மெய்யளவு வாதமொன்று மேல்பித்த மோர்ரையாம்
ஐயங்கா லென்றே அறி”

- கண்ணுசாமியாம்

Among the 72000 *Naadis* in the body Ten *Naadis* are important and are called as “*PeruNaadi*” or *dasanaadi*. Among the ten *Naadis* three are most important or vital and basics

ones for other Naadis namely *Idakalai*, *Pingalai*, *Suzhumunai*. These three *Nadis* are stimulated by the three *Vayus* namely *Abanan*, *Pranan*, *Samanan*. The *Vatham* is created by the interactions of the *Idakalai* and *Abanan* *vayu*, while *Pitham* is formed by the interaction of *Pingalai* and *Pranan* and by the interaction of *Suzhumunai* and *Samanan*, *Kabam* is formed.

It is from the left nostril the *Idakalai* starts and extends up to 16 inches, while *Pingalai* starts from the right nostril and extends up to 8 inches. The *Suzhumunai* is in between the above two and extends upto 4 inches. So *Idakalai*, *Pingalai* and *Suzhumunai* are the *Siddhar's* presumption of three main channels of the nervous system of the human organism, through which the positive current of the active force of life called *Pranan* with its kinetic energy passes through as impulses and activates the whole organism through the 72000 network fibres.²

DIFFERENTIATION OF ONE SEEVASKTHI INTO THREE

“கரிமுகனடியை வாழ்த்திக் கைதனில் நாடிபார்க்கில்

பெருவிரலங்குலத்திற் பிடித்தடி நடுவே தொட்டால்

ஒரு விரலோடில் வாதம் உயர் நடுவிரலிற் பித்தந்

திருவிரல் முன்றிலோடிற் சேத்தும நாடியாமே”

-அகத்தியர் நாடி

After bowing to almighty, place the three fingers of the physician over patients hand one finger breadth below the base of the thumb the Naadi is felt by giving medium pressure the beat felt in the first finger indicates *Vatham*, the middle finger indicates *Pitham* and the ring finger indicates *kabam*.

The concept of dividing one *Seevasakthi* in to three is explained by the sage *Thirumoolar* as

“குறியாய் வலக்கரங் குவிந்த பெருவிரல்

வறியா யதன்கீழ் வைத்திடு மூவிரல்

பிரிவாய் மேலேறிப் பெலத்தது வாதமாம்

அறிவாய் நடுவிர லமர்ந்தது பித்தமே

பித்தத்தின் கீழே புரண்ட தையமாம்

உற்றுற்றுப் பார்க்கவோர் நரம்பே யோடிடும்

பத்தித்த மூவரும் பாய்கின்ற வேகத்தால்

மத்தித்த நாளம்போல் வழங்கும் நரம்பிதே”

-திருமூலர் நாடி

While keeping the three fingers over the radial artery, after pressing and relaxing the fingers one can feel the same blood flow is dividing into three and the pulsations are felt over the index finger, middle finger and ring finger as *Vatham*, *Pitham* and *Kabham* respectively. There is only one flow of blood vessels but it is divided into three components.²

Index finger- Vatham

Middle finger- Pitham

Ring finger- Kabham

EXAMINATION OF NAADI

“பார்க்கவே கைபிடித்து நாடி தன்னைப்

பகர்ந்திடவே நெட்டையது வாங்கிப் பின்னுஞ்

சேர்க்கவே மணிக்கட்டு மேல தாக்ச்

சிறப்புடனே நாடிதன்னை விரலாற் காண

தீர்க்கவே அழுத்திப்பின் தளர்த்தி யேதான்

திறமுடனே விரல்களையு மாறி மாறி

ஆர்க்கவே நாடிதன்னைப் பார்ப்பா யானால்

அப்பனே நாடினடை தெரியும் தானே”

-வைதிய சாரசங்கிரகம்

First and foremost thing in the procedure of observing *Naadi* is the physician and the patient must sit comfortably facing each other. Before holding the hand, physician must enshrine his *Guru*.

Then for getting best results, in male right hand is examined while left hand in female.

The elbow of the patient is semiflexed with the lower end of the forearm in the mid prone position and the patient's right wrist is held on its lateral aspect up from the left hand of the physician holding the wrist of the patient between thumb and three fingers. Rub the palm of the patient and gently flex and extend the wrist joint so as to get accurate pulsation.

The three fingers of the physician is placed in a unique way in which there is half centimeter interspace between each finger. Index finger at the top near to the wrist joint, then middle finger followed by ring finger at the last. The three fingers should be pressed and released frequently and simultaneously to feel the exact conditions of the *Naadi*. Thus different pulses are felt differentially in the same vessel.

The beat sensed on index finger indicates the status of *Vatha* humor. Likewise in middle and ring finger *Pitha* humor and *Kaba* humor respectively. By merely placing the fingers and feeling the pulse is not enough for reading *Naadi*. Analytical and careful observation of the character of the beat wave is needed for judgment of the condition of the patient. Thus the practitioner has to scrutinize the number and nature of beats, their motion, pressure, the rousing and depression for reaching into a conclusion.^{2,7,8}

NAADI MEASUREMENT

“வழங்கிய வாதம் மாத்திரையொன் றாகில்

தழங்கிய பித்தந்தன் னிலரை வாசி

அழங்குங் கபந்தா னடங்கியே காலோடில்

பிசங்கிய சீவர்க்குப் பிசுகொன்று மில்லையே”

- குணவாகட நாடி

According to *Gunavagada naadi* the measurement of *Vatham* is one and that of *Pitham* is half and *Kabam* is quarter and the measurement is called as *mathira* (Expansile unit). So the ratio of the *Naadi Vatham:Pitham:Kabham* is 1:1/2:1/4 and is normal and there will not be any disease in the body.²

The same concept is explained in *Kannusamiyam* as

“மெய்யளவு வாதமொன்று

மேல்பித்தமோர்ரையாம்

ஐயங்காலென்றே அறி”

-கண்ணுசாமியம்

DEFINITION OF MATHIRAI

“செய்கின்ற நாடி பெருவிரலின் மேலாய்

திருந்திழை மூன்றங்குலத்தி னடுவ தாக

தைகின்ற கோதுமை யரிசி போலாச்

சர்வம் வியாபித்திரிக்குமதுதான் கூறில்”

-குணவாகட நாடி

“அரைந்தார் முனிவர் யளவுகேள் தோற்றம்

விரை கோதுமையாம்வியந்து”

-கண்ணுசாமியம்

One *mathirai* is the time and amplitude taken by the pulse to swell to the height of one full wheat grain and to ebb.²

PLACES SUITABLE FOR NAADI READING

According to sage *Thirumoolar*,

“தாதுமுறைகேள் தனித் தகுதிச் சந்தோடு

ஓதுறு காமிய முந்திநெடு மார்பு

காது நெடுமூக்குக் கண்டம் கரம்புருவம்

போதுறு முச்சிபுகழ் பத்தும் பார்த்திட்டே”

-திருமூலர் நாடி

Naadi can be read in 10 places all over the body. They are

1. Inner side of the ankle (Posterior Tibial artery)
2. Genitals (Femoral Artery)
3. Umbilicus (Abdominal aorta)
4. Chest (Auxillary artery)
5. Ears (Superficial Temporal Artery)
6. Nose (Angular Artery)
7. Neck (Carotid Artery)
8. Hands (Radial Artery)
9. Eyebrows (Supra orbital Artery)
10. Centre of the scalp (Anterior fontanelle)

According to *Brahmamuni*

“கூர்ந்திடவே கன்னமது சுழியிற் றானும்

குறிப்பான கைகலிலும் மர்மஸ்தானந் தன்னில்

சார்ந்திடவே கணுக்காலி னுட்பு றத்தில்

சார்வாகப் பெருவிரற்கால் மேல் தாக

தேர்ந்திடவே நாடிதனை யுபயோ கிக்கத்

தெளிவாக மாந்தருக்குச் செப்ப லாச்சு

பேர்ந்திடவே சகலருக்குங் கரத்தி னாடி

பேசினார் பிரம்முனி பேசினாரே”

-பிரம்மமுனி

Naadi can be manifested in 72000 vessels but among them, in ten places it can be read easily.

According to *Brahmamuni* 5 places are important and Hands are the most important one.

They are

1. Hands
2. Neck
3. Genital organs
4. Medial side of the ankle
5. Above the level of the big toe of the foot

Though we usually perceive naadi in hand, there are other areas in human body in which *Naadi* can be traced. These sites are chosen with respect to the artery coursing superficially over the bone.

They are; *Kandam, Karam, Munkai, Maarbu, Puruvam, Undhi, Kamiya Kodi, kaal, sandu, Utchi*

Admitting the fact that naadi can be perceived in the above mentioned sites, *karam* (hand) is the most convenient, easy and acceptable site both for physician and patient.²

LOCATIONS OF THRIDOSHAM

“அறியவுந்தி வாதமடு பித்தந் தானும்

அறியு நடு மார்பில் வன்மை குறிக்குமே

ஐயமுய ருச்சியண்டு நிலையாங் குணரப்

பையக் கரம்பற்றிப் பார்”

கண்ணுசாமியம்

“செப்பு முந்தி சிதையும் வாதநிலை

ஒப்பு மார்பு முதையும் பித்தநிலை

கப்புமுச்சி கழன்று மைய நிலை

மெய்ப்பு மாமுனி மீண்டு முரைத்தே”

-வைதியசார சங்கிரகம்

According to *Kannusamiyam* and *Vaidya Sara sangraham*, *Vatham* is located below the umbilicus, *Pitham* in between umbilicus and neck and *Kabam* above the neck.²

NAADI- MALE AND FEMALE VARIATION

“கேள்பா புருடருக்கு வலது கையைக்

கிருபையுடன் தான்பிடித்து நெட்டை வாங்கி

தூள்பா பெருவிரலோ ரங்குலத்துக் கப்பார்

சுகமாக மூவிரலோ லழுத்திப் பார்க்க

வாளப்பா முதல்விரலே வாத நாடி

வன்மையுடன் நடுவிரலே பித்த நாடி

கேள்பா அணிவிரலே சேத்தும நாடி

திரமாக நின்னறிவாற் றெளிந்து கானே”

“பார்க்கவே பெண்டுகளுக் கிட்து பக்கம்”

-பரிபூரண நாடி

Naadi can be read in both hands, but according to *Siddha* literature right hand is preferable for male and left hand for female.

While mentioning about the reason for the differentiation in hands for both male and female literature states that the navel region points upwards for female and downwards for females. Due to this reason the *Naadi* in male and female are read in right and left hands respectively (Ref: Volume 3 *Anuboga Vaidhya parama Rahasyam*)

“வேனென்ற பத்துமொன்றாய் மனதுங் கூடி

மேவியவன் கலந்துவந்து விழுகும் போது

மானென்ற மெளனபர வசமே யாவான்

மருவுகின்ற பெண்ணுக்கு முறைதான் கேளே”

-பிண்டோற்பத்தி

“முறையான பெண்ணானும் மெளனமுற்றால்

மோகமில்லை கருவங்கேதரிக்கும் பாரு

நிறையான வலத்தோடில் ஆணை யாகும்

நேராக இடத்தோடில் பெண்ணை யாகும்

உறையான கருப்பையில் சுக்கிலமாய்ப் பாய

உத்தமனே சுரோணிதந்தா னுறைந்து கொள்ளும்”

-பிண்டோற்பத்தி

According to *Agathiyar Pindorpathi*, during sexual intercourse the eleven principles namely *Gnanendriyam*, *kanmendriyam* and the mind should be united and at that time when the breathing operates through the right nostril (*Pingalai*) the child born will be male and it will be female if the breath passes through the left nostril (*Idakalai*). If the breath passes in between both nostrils (*Suzhumunai*) the child will be eunuch or hermaphrodite. So it is assumed that the *Naadi* in both hands will also be different.²

PULSE READING- THE POINTS TO BE REMEMBERED

To know about the conditions of the three dosham Naadi should be examined in a proper way. The important points to be in mind before reading *Naadi* are

- 1.Time/season
- 2.Place
- 3.Age
- 4.Physique of the patient

To get a correct result the characteristics of the *Naadi* should be measured in one or two times in different time with utmost concentration. The concentration and the purity of mind of the physician is very essential while reading *Naadi*. Proper learning from a *Guru* and his guidance are the only method to read *Naadi* and to diagnose the deranged *Thridosham*. The characteristics of *Naadi* movements are²

- 1.*Thannadai*(playing in)
- 2.*Puranadai*(playing out)
- 3.*Illaithal*(Feeble)
- 4.*Kathithal*(swelling)
- 5.*Kuthithal*(Jumping)
- 6.*Thullal*(Frisking)
- 7.*Azhuthal*(Ducking)
- 8.*Paduthal*(Lying)
- 9.*Kalathal*(Blending)
- 10.*Munnokku*(Advancing)
- 11.*Pinnokku*(Flinching)
- 12.*Pakkam nokku*(Swerving)
- 13.*Suzhalal*(Revolving)

VAATHA, PITHA, KABA NAADI AND THONTHA NAADI CONCEPT

Any one of the *Vatha*, *Pitha* and *Kabha Naadi* if increases in its normal volume it is called as vitiation of that particular humour and is also called as *மிகுதல், மீறி நடத்தல், கதித்தல், தோடத்தில் தோடம்*.

1. If *Vatha Naadi* is doubled its normal volume or double the amount of its normal mathirai it is called as *வாதமிகுதி, வாதம்மீறி நடத்தல், வாதம் கதித்தல், வாதத்தில் வாதம்*
2. If *Pitha Naadi* is doubled its normal volume or double the amount of its normal mathirai it is called as *பித்தமிகுதி, பித்தம்மீறி நடத்தல், பித்தம் கதித்தல், பித்தத்தில் பித்தம்*
3. If *Kaba Naadi* is doubled its normal volume or, double the amount of its normal mathirai it is called as *கபமிகுதி, கபம்மீறி நடத்தல், கபம் கதித்தல், கபத்தில் கபம்*.²

தொந்த நாடி

“தானென்ற வாதமாத் திரைதா னிரண்டு

தப்பாது பித்தமது தானொன் றேறில்

வேனென்ற வாதபித்தந் தொந்திப் பாகும்

மிகுவாத மிரண்டுஞ்சிலேத் தும்மொன் றாகில்

ஊனென்ற வாதமையந் தொந்திப் பாகும்

உற்றபித்த மிரட்டித்துரைவாத மொன்று சேரில்

கோனென்ற பித்தமுடன் வாதஞ் சேர்த்துக்

கொண்டதிந்தரோக மெனக் கூறே”

“கூறுவேன் பித்தமாத் திரையிரண் டாகில்

கொடியசிலேற் பனமொன் றுதிக்கு மாகில்

தூறுவேன் பித்தசிலேத் துமந்தா னென்றும்

துலங்குசிலேத் தும்மிரண்டு வாத மொன்றும்

தேறுவேன் சிலேத்தும வாதந்தா னென்றும்

சிலேத்தும மிரட்டித்துப் பித்தமொன்று சேரில்

வேறுநீ நிணையாதே சிலேத்தும பித்தம்”

-பதினென் சித்தர் நாடி சாஸ்திரம்

1.Vatha Pitha thontham:

If *vatha Naadi* is Two mathirai(double the amount of its normal mathirai) and *Pitha Naadi* is in between its normal and its double mathirai(in between $\frac{1}{2}$ and 1 mathirai) then the *Naadi* is called as *vatha pitha thontham*.

2.Vatha kaba thontham:

If *vatha naadi* is Two mathirai (double the amount of its normal mathirai) and *Kabha Naadi* is in between its normal and its double mathirai (in between $\frac{1}{4}$ and $\frac{1}{2}$ mathirai) then the *Naadi* is called as *vatha Kaba thontham*.

3.Pitha Vatha thontham:

If *Pitha naadi* is One mathirai (double the amount of its normal mathirai) and *Vatha naadi* is in between its normal and its double mathirai (in between 1 and 2 mathirai) then the *Naadi* is called as *Pitha Vatha thontham*.

4. Pitha kaba thontham:

If *Pitha Naadi* is One mathirai(double the amount of its normal mathirai) and *Kabha naadi* is in between its normal and its double mathirai(in between $\frac{1}{4}$ and $\frac{1}{2}$ mathirai) then the *Naadi* is called as *Pitha Kaba thontham*.

5.Kaba Vatha Thontham:

If *Kaba Naadi* is $\frac{1}{2}$ mathirai(double the amount of its normal mathirai) and *Vatha naadi* is in between its normal and its double mathirai(in between 1 and 2 mathirai) then the *Naadi* is called as *Kaba Vatha Thontham*.

6. Kaba Pitha Thontham:

If *Kaba Naadi* is $\frac{1}{2}$ mathirai (double the amount of its normal mathirai) and *Pitha naadi* is in between its normal and its double mathirai (in between $\frac{1}{2}$ and 1 mathirai) then the *Naadi* is called as *vatha pitha thontham*.^{2,7,9,10,11}

PANCHA BOOTHA NAADI

“தூண்டிடவே பெருவிரல்தான் பூத நாடி

தொந்தமாம் ஆள்தூண்டி வாத மென்க

அண்டிடவே நடுவிரல்தான் பித்த நாடி

அணிவிரல் பௌத்திரந்தான் செத்தும நாடி

பூண்டிடவே சிறுவிரல்தான் பூத நாடி

பூட்டினார் குருநாடி யைந்து கோர்வை

நீண்டிடவே இப்பின்னல் யார்தான் காண்பார்

நிறைந்தபரி பூரணத்தோர் காண்பார் தாமே”

-வைத்திட சார சங்கிரகம்

According to the above verses apart from the three *Naadis* there are two other *Naadis*. They are

- The *Naadi* felt by the thumb is called *Bootha Naadi*
- The *Naadi* felt by the little finger is also called as *Bootha Naadi*
- The index finger feels *Vatha Naadi*
- The middle finger feels *Pitha Naadi*
- The ring finger feels *Kaba Naadi*

DIAGNOSIS OF DISEASE AND DISEASE FREE BODY THROUGH NAADI

“வாதபித மைய மூன்றும்

வன்பலத்துடனெ த்த்தம்

பெத மொன்றில்லா வண்ணம்

பேசிய தானம் தன்னில்

நீதியாய் நிலைத்து நிற்கில்

நெடும்பிணி சிக்க வில்லை

தாதுவு மொன்றோ டொன்று

தாவிடிற் பிணிகள்தானே”

-கண்ணுசாமியம்

If three *Naadi Vatham*, *Pitham* and *Kabam* are in normal ratio or its *Mathirai* are with in normal limits there will not be any disease in the body. If there is any increase or decrease in its mathirai or mixing up of two Naadi or any abnormal changes in *Naadi* regarding place and season then there will be disease and its symptoms will be present in the body.²

The same thing is explained as below in other texts also

“அயனரி யரனாய மர்ந்த மூவரும்

த்த மாத்திரை தானங்காலம்

பெதி யாசரத்திடில் பிணியில்லை காணே

பேதியாய் யிவர்கள் பிணங்கில் பிணியே”

“மற்றுநல் வாதமு மாறாத பித்தகபம்

முற்றுமவை முரணா மொயம்புடனே- உற்றிருக்கில்

நீதியாய் நோயில்லை நின்றவவை மாறிடவை

பேதிக்கும் நாடியென்று பேசு”

-கண்ணுசாமியம்

PROMINANCE OF NAADI AND DAY

“தினகர னுதயஞ் சேரும் வாதம்

எனவாம் நண்பகல் இயலும் பித்தம்

அந்தி வரினே அடையவது ஐயம்

பிந்திரவின் முதற் பேசும் வாதம்

இப்படி நாடி ப்ப்பத் தாங்கடி

கைப்படி செல்லுமென் ற்றிவீர் பிடகரே”

-கையெழுத்துப்பிரதி

“காலயில் வாத நாடி கடிகையில் பத்தகும்

பாலையில் பித்த நாடி பகருச்சி பத்தாகும்

மாலையாம் செத்தும் நாடி மதிப்புடன் பத்தாகும்

வாலையா மனோன்மணிக்கு வகுத்துமே தொகுத்ததாமே”

-வைத்திய சார சங்கிரகம்

In day time *Vatham* will be prominent for the initial 10 *Nazhigai* (4 hours) from Sunrise, the next 10 *Nazhigai* it will be *Pitha* predominating time and the last 10 *nazhigai* it is *Kabha* predominating time. The same ratio continues from the Sunset up to next Sunrise.²

Table: 1 Prominence of Naadi and day

TIME	KAALAM
6 AM -10 AM	VATHAM
10 AM – 2 PM	PITHAM
2 PM – 6 PM	KABHAM
6 PM – 10 PM	VATHAM
10 PM – 2 AM	PITHAM
2 AM – 6 AM	KABHAM

NAADI AND WEEKS

“சந்திரநாட் காலையில் வாதம்

நடந்திடில் சுகமெய்தும்”

“சந்திர நாளாஞ் சசிபுகற்பந்தி

சுக்கில பக்கச் சுறற்குரு காலையில்

இறைவ னியங்கில் எய்துஞ் சுகமே”

-கையெழுத்துப்பிரதி

If *Vatham(Idakalai)* is prominent in the morning during Monday, Wednesday, Friday and Thursday in waxing moon(*Sukkila patcham*) the body and mind will be healthy.

If *Pitham* is prominent in the morning during Sunday, Saturday and Thursday in waning moon (*Krishna patcham*) the body and mind will be healthy

There is no textual reference regarding the prominence of *Kaba Naadi* in the morning.

Vitiation of the three Naadi during the week days and diseases

Vatha Naadi:

When *Vatha Naadi* is prominent during the morning of Sunday, cough, phlegm, dyspnoea etc will be manifested. If on Tuesday, fever will occur. During Saturday, Seethalam

(coidness) and Sanni (Delirium) will occur. If it is during the Thursday of Krishna patcham (Waning moon) pain throughout the body will be manifested.

Pitha Naadi:

If *Pitha Naadi* is prominent in the morning of Monday, Salathodam (common cold) will occur. During Wednesday, headache and Neertram (Catarrh) will occur. During Friday, eye diseases and ear diseases will occur. If during Thursday of Sukkila patcham (waxing moon) headache and fever will occur.

Kaba Naadi:

There is no evidence of prominence of *Aiya Naadi* in morning.²

NAADI AND MONTH

The month in which Naadi's are prominent:

“மூவரு மீறி முனிவு கொள்ளாமல்
த்தம் நிலைடில் தன்னரசியலும்
கால வரைதனைக் கிளறக் கேண்மின்
ஆடியாதியாய் ஐப்பசி ஈராய்
அனில மதற்கோ ராசியில் காலம்
மீன் முதலானி வீறுகொள் மந்திரி
தேள் முதன் மாசி செனாபதிக்கே”

கடக முதல் துலாம்வரையும் வாதமாகும்
கண்ணாடி யைப் பசியு மதுவேயாகும்
விடமீன் முதல்மிதுனம் பித்தமாகும்
விரைகமழ் பைங்கூனி ஆனியது வேயாகும்
திடமான விருட்சிகமுதற் கும்பஞ் செத்துமஞ்
சேர்ந்த கார்த்திகை மாசியது வேயாகும்
நடைமேவும் வாதபித்த சேத்துமந் தானும்
நலமாக மாதமுதல் நடக்குங் காணே”

-பதார்த்த குண சிந்தாமணி

Table 2 Naadi and month

Vatham	Aadi- Aippasi (July 15- November 15)
Pitham	Panguni-Aani (March 15- July 15)
Kabham	Kaarthigai-Maasi (November 15-March 15)

The time at which *Naadi* should be read in each month:

“சித்திரை வைகாசிக்குள்
செழுங்கதி ருதயந் தன்னில்
அத்தமா மானி யாடி
ஐப்பசி கார்த்தி கைக்கும்
மத்தியா நத்திற் பார்க்க
மார்கழி தையு மாசி
வித்தகன் கதிரோன் மேற்கில்
விழுகின்றா நேரந்தானே
தானது பைங்கூ னிக்குந்
தனதுநல் லாவணிக்கும்
மானமாம் புரட்டாசிக்கும்
மற்றைராத் திரியிற் பார்க்கத்
தேனென்ற மூன்று நாடித்
தெளிவாக்க் காணு மென்று
காணமா முனிவர் சொன்ன
கருத்தைநீ கண்டு பாரே”

-அகத்தியர் நாடி

Table: 3 Naadi examination time and month

MONTH	TIME
Chithirai, Vaikaasi	Sunrise
Aani, Aadi, Aippasi, Kaarthigai	Mid day
Maarkazhi, Thai, Maasi	Sunset
Panguni, Aavani, Purattasi	Night

Condition at which Naadi will not be felt accurately:

“குறையாக ஸ்திரிபோகர் நெடு நோயாளோர்

குதிரை மதகரியேறி நடந்தோர் எய்தோர்

நிறைவாக உண்டெழுந்தோர் லாகிரி கொண்டோர்

நீர்ப்பாடு நீரிழிவு குறை நோயுற்றோர்

முறையாக வீக்கமுள்ளோர் அத்திக் காய்வால்

முசித்திளைத்தோர் பயமுற்றோர் விடமணைந்தோர்

அறையாம லோட்டமுற்றோர் கிலேசங் கொண்டோர்

அறப்புசித்தோர் தாதுவகுப் புறமாட்டாதே”

-சதக நாடி

- Persons immediately after copulation
- Person suffering from chronic diseases
- After horse or elephant riding
- After walking a long distance, or a long run
- Immediately after taking much food
- After the consumption of alcohol
- Person suffering from polyuria, Diabetes mellitus, leprosy etc..
- Persons who are weak due to anasarca or any fever affecting bone
- Persons who afraid of something or with anxiety
- Persons with poisonous bites²

“மாட்டாங்கி யானபெண்கள் கெர்ப்பத்தோர்க்கு

மாதவ்பிடா யானோர்க்கும் பெரும்பாட்டோர்க்கும்

தேட்டாசை யதிக விஸார்த்தி னோர்க்கும்

தேய்த்தெண்ணெய் முழுகினார்க்குஞ் சின்ங்கொண்டோர்க்கும்

வாட்டாசை கன்னியார்மேல் பராக்கானோர்க்கும்

வயசாக இனைத்தோர்க்கும் மதங்கொண்டோர்க்கும்

மோட்டாத்து மாக்களுக்குந் தாது பார்க்க

ம்றையாக வரு நாடி வகுப்பறாதே”

-சதக நாடி

- Pregnant ladies
- During menstruation
- Persons suffering from menorrhagia
- Persons having too much of sorrow
- Immediately after taking oil bath
- Persons with anger
- With ungovernable lust
- Old and weak people
- Reckless and arrogant persons
- Obese persons

“வகுப்பாக்க கை முறிந்தோர் சோகை கொண்டோர்

மாண்டபிணந்தனை கொண்டோர் வாந்தி விக்கல்

தொகுப்பாக இவை எடுத்தோர் விரத முற்றோர்

சோனை மழை தனில்நனைந்தோர் காசங் கீதம்

பகுப்பாக வேபடித்தோர் களறி சுற்றிப்

பல நாட்டியங்கள் மிக வாடி யெய்த்தோர்

மிகுப்பாக சுவாசமதை அடக்கினோர்க்கும்

விரைவான நாடியது வியோளங்குந்தானே”

-சதக நாடி

- Persons with fracture
- Anaemic persons
- Persons who have touched corpse
- Person who have vomited or having hiccup
- Persons in fasting
- Persons wet in rain
- Persons after singing for a long time
- Persons who have tired after fencing or dancing
- Persons while controlling their breath

Conditions at which pulse become rapid and can't be read properly:

“வெய்யலிலே எப்போதும் நடக்கை யாலும்

வெம்பசியுலாகிரி களருந்த லாலும்

துய்யவெய்யில் புகயிலைகள் கொள்ள லாலும்

துடர்ந்தசுர நித்திரைகள் கொள்ளாத லாலும்

நையவே கோபமது கொள்ளலாலும்

நாள்தோறும் ரத்தமது வடிதலாலும்

துய்யவே நாடி நடை தீர்க்கமாகத்

துடிதுடித்துப் படபடத்து ஓடுந்தானே”

-பதார்த்த குணசிந்தாமணி நாடி

- Person whose body has become distressed due to their wandering in Sun
- Taking very hot food at the time of excess hunger
- Consumption of alcohol
- Chewing tobacco in the hot Sun
- Persons having continuous fever
- Persons having disturbed sleep in nights
- Persons with mental perplexity
- Weak persons
- Persons having blood loss

The Time At which Pulse become weak and Cant be read properly

- Excess hunger
- Persons having mental distress
- Coldness
- Increased sleep

Condition at which Naadi will not be felt accurately- Another concept

“கொண்டிடவே கயரோகி காசரோகி

குறிப்பாக்ச் சிற்றின்பம் செய்த பேர்கள்

அண்டிடவே தரிதரர்கள் விருத்தர் பாலர்

அன்பாகத் தண்ணீரில் மூழ்கினோர்கள்

கொண்டிடவே இவர்களது உறுப்பின் தாது

கூறவே முடியாது எவர்க்குக் கிடும்

பண்டிடவே இப்பரேட்சை யார்தான் காண்பார்

பராபரத்தின் மகிமையிது பாரு பாரே”

பதார்த்த குணசிந்தாமணி நாடி

- Old aged persons
- Children
- Tuberculos patients or any other respiratory problem
- After copulation
- After submerged in water

“செப்பவே நாடி தானுஞ்

சிறப்புடன் பார்க்கும் போதில்

ஒப்புடன் பூமியிற்கை

ஊன்றிக்கொண்டிரிக்கும் போதும்

துப்புறக் காலைக் கட்டிச்

சோர்வடைந்திரிக்கும் போதும்

செப்பவே கட்டி ருந்தால்

சிதையுடன் நாடி தோன்றா”

-பதார்த்த குணசிந்தாமணி நாடி

While fixing the hands on the floor firmly. When fixing the hands firmly on the floor, when tying the hands on the legs, when there is any ligature above the place where we palpate the Naadi. In the above conditions, the beating of Naadi (Pulse) will be improper.

“எண்ணையின் தலையின் போது

மீரமாய் நின்ற போதும்

உண்ணும் நல்லுணவின் போது

முண்டாம்வெம் பசியின் போதும்

திண்ணமாய் நடக்கும் போதும்

சிறறின்ப மூட்டும் போதும்

பண்ணிய நாடி பார்க்கில்

பலிந்திடா தென்று செப்பவே”

-பதார்த்த குணசிந்தாமணி நாடி

During taking oil bath, when in wet clothes, during eating, when having hunger, at the time of copulation and during walking the pulse beating will be confusing.²

NAADI INDICATING THE SIGNS OF DEATH AND INCURABILITY

- Death is sure when *Kaba Naadi* independently doubles with the reduction or disappearance of *Vatham* and *Pitham*
- It is futile to treat a patient when his *Vatha* and *Pitha* pulse have disappeared
- It is futile to treat a patient when his *Pitha Naadi* have disappeared, when *Kaba Naadi* alone prominent. If *Vatha Naadi* rises, prognosis will be good.
- If *Kaba Naadi* of the patient increases and mingles with *Pitha Naadi*, the patient will die within a day. After the disappearance of the *Pitha Naadi*, *Kaba Naadi* mingles with *Vatha Naadi*, the patient will die within 24 minutes(1 *Nazhigai*)
- If the *Naadi* is found agitated and precipitated on the thighs, the waist and below the chest, it is a sign of nearing death; when if anyone of the three *Naadis* palpated and if the patient is

having excess of thirst, dryness of tongue, loss of luster in the eyes etc, the prognosis will be bad.

- .If the *Naadis* are agitated and disordered with tremors, dryness of tongue, eyes staring up constantly, dyspnoea and phlegm in throat, the prognosis will be bad.
- If the three *Naadis* are combined and felt as one and simultaneously disappears or *Naadi* is felt like the fluttering of the cut tail of the streaked lizard, the sign shows the nearing of death.
- If the levator (Nerve of the hind part of the neck) is chill, or if the five sense organs are weary, gnashing of the teeth, dryness of the tongue, tremors, feeble respiration, staring of the eyes and if the *Naadi* is mingle and flutter like a locust, it indicates sign of death.
- If *Kaba Naadi* is runs like a lood independently, death will be on the next day, If the *Pitha Naadi* divert and pass independently, death will be in third day; If the *Vatha Naadi* divert and pass independently death will be in eight days.
- If the *Vatha, Pitha* and *Kaba Naadis* vibrate simultaneously like scorpion sting, death will be in amonth
- I all the three *Naadis* mingle together as a whirling beetle on water, if the spin like a top, like a locust, if they turn and fall death is sure.
- If *Vatham* and *Pitham* mingles and and divert, death will be in 15 days. All the three *Vatham, Pitham* and *Kabam Naadis* divert and pass, death will takes place within 40 days

1. Death is sure when the following conditions prevail

- When palpating the pulse, if all the three pulses sink
- If all the three pulses completely diminish
- All the three pulses are rapid simultaneously
- If all the three pulses are slipping from their natural occur state and run downwards.

2. If the pulse beat irregularly as follows, death will occur within four or five days

- If *Kaba Naadi* is prominent in morning
- If *Pitha Naadi* is prominent in the noon
- If *Vatha Naadi* is prominent in the evening

3. If *Kaba Naadi* is prominent continuously in the morning, death is sure

4. If all the three pulses are crawling like ants, death will be occurring after a month.

5. If all the three pulses beat like the wings of conical (sempothu), the patient will die within ten months
6. If *Kaba Naadi* stands upright like a horse, death will take place within a month
7. If *Kaba Naadi* is shivering and agitated like peacock and leech, death is sure within seven days.
8. If *Pitham* is shrinking and *Vatham* and *Kabam* are coupled along with the symptoms like emaciation of the body, paleness, coldness of the extremities, throbbing of the chest during respiration, dripping of tears from the eyes and water from the nose, dryness of tongue, blackening of the teeth and vomiting, death is sure.
9. If *Pitham* and *Vatham* vanish and *Kabam* becomes relaxed with hiccup, vomiting, chest block, dyspnoea, perspiration, nasal block, breathing through the mouth, dryness of tongue and closing of the eyes, death is sure.^{2,3}

Naadi could be divided into different types based on the curability. They are

1. **தீரும் நாடி:**

It is the *Naadi* which changes with time, either day by day or even by hours.

2. **தீராது நாடி:**

If the *Naadi* does not change with time or even after treatment (Permanent *Naadi*) it is called as *Asathiya Naadi*.

3. **சாத்திய நாடி:**

If this *Naadi* occurs diseases would be cured. *Vatha Pitha Naadi* and *Pitha Vatha Naadi* comes under is *Sathiya Naadi*.

4. **அசாத்திய நாடி:**

Disease will be incurable if the *Naadi* is *Asathiyam*. *Vatha Kaba Naadi* comes under this category.

5. **மரண நாடி:**

Death will occur if this category *Naadi* occurs. *Kabha Vatha Naadi*, *Kaba in Kabam Naadi*, *Kaba Pitham*, *Mukkuttra Naadi* comes under this category.

Guru Naadi is said to be the master (Guru) of all other naadis and it is considered to be equal with *Seeva naadi* or *Uyirthathu*. It is spoken of so highly and is very difficult to understand without a proper *Guru* and a long year of experience. This *Naadi* is said to stimulate and sustain the other *Naadi* and is the pivotal of the five *Naadi*. Only those who are perfectly trained in *Naadi* perception will be able to feel the *pancha Naadi*.

The definition of Guru Naadi

Guru Naadi will indicate the life force or the soul itself or it is the force which unites the soul and the body with the *Uyir*.

கரு உற்பத்தி (Genesis of Guru Naadi):

Union of male and female is necessary for the genesis of a new life. The first and foremost thing to be happened for the union of a male and female is the generation of libido in their minds in which *Aakaya bootham* (Space) element has a significant role. As a result of this body gets stimulated sexually in both sexes which produces some vibrations and movements in the body, here *Vayu bootham* (Air element) plays a significant role. As a result of the stimulated *Vayu bootham* heat would be generated in the body due to the stimulation of the *Theyu bootham* (Fire element). Increased movements and vibrations in the body some secretions starts to occur as a results of the stimulation of the *Appu bootham* (water element). As a result of the above mechanism ejaculation of the semen and union of the sperm and ovum occurs which leads to the process of fertilization and results in the formation of zygote (A dew drop like structure) which has the character of the *Man bootham* (Earth element).

As a result of the heat present inside the womb, water present in the dew drop getting boiling, like a water containing pan kept over the fire flame, which produces *vayu*. As the movements of the two elements increases due to the action of fire element, many changes occurs inside the formed mass and womb, which finally results in the formation of a thread like structure. As it is the first formed structure in the mass it is called as *Guru Naadi*. This *Guru Naadi* divides into three structures- *Idakalai*, *Pingalai*, *Suzhumunai* followed by the formation of other *Saptha naadis*. 56 branches are produced from it which decides all the functions of the body. From the 56

branches small branches starts to develop results in the formation of *Mudichukal* and 72000 nerves and vessels.

There are many schools of thought regarding this *Naadi*. They are

1. *Guru Naadi* will be found in front of the *Pitha Naadi*

2. It is strong enough to control *Dasa Naadis*

3. It pervades through the body in all system including the brain. It mingles with three *Naadis* namely *Vatham*, *Pitham* and *Kabam*. It crosses like a scissors and controls *Idakalai*, *Pingalai*, *Suzhumunai*.

Guru Naadi is the root cause for the *Vatham*, *Pitham* and *Kabam* and it is nothing but the soul itself

“சொல்லுகின்ற வாதபித்த சேத்துமந் தன்னில்

சுகமான பித்தமது பூத நாடி

வெல்லுகின்ற குருநாடி ஆத்மநாடி

வெகுநோயை யகற்றிநலங் காட்டும் நாடி

பல்லுயிர்க்குந் தானாக இருந்த நாடி

பலகோடி அண்டமெல்லாம் நிறைந்த நாடி

அல்லலுறு மாங்காரம் பிராண நாடி

அக்கினியைச் சேர்ந்தெழுந்த நாடி தானே”

-சதக நாடி

As per the above stanza, the *Pitha Naadi* itself is considered as *Bootha Naadi*, *Guru Naadi*, and *Athma Naadi* etc. It is the base for *Akankaram*, *Pranan* and *Uyir akkini*. It is capable of curing all diseases. *Guru Naadi* will always be found in front of the *Pitha Naadi*, though some authors have different opinion that it is different from *Pitha Naadi*. According to the *Siddha*

literature, *Guru Naadi* is the cause for other *Naadis* and it controls all the *Naadis*. Some authors consider that *Guru Naadi* is a separate entity since it controls and gives strength to the other *Naadis*. And it is very difficult to feel the *Guru Naadi* alone when all the *Naadis* are present.

“குரு நாடி எப்போதும் பித்தத்தின் முன்னே

குறிப்பாக நிற்குமது பாரு பாரு

குரு நாடி தச நாடி திறமாய் நிற்கும்

தாக்குமுடல் உயிராக நிற்கும் பாரு

திரிநாடி வாதபித்த மையம்நடுவிற்பற்றி

தீவிரமாய் மூன்றுவிரல் தாண்டிப் பாயும்

வருநாடி விசநரம்பி னூடே சேர்ந்து

வளர்சந்திர மண்டலம்போய்ச் சேரும் பாரே”

-வைத்திய சார சங்கிரகம்

“பாரேதான் பம்பரம்போற் கிறுகி றுத்துப்

பகர்வாத பித்தமைய மென்ற நாடி

சேரவே மண்டலங்கள் மூன்றுஞ் சுற்றி

செழித்தகத்திரிக் கோன்மாற லெனவே சேர்ந்து

வாரேதான் வாதபித்த மையம்நடு விருந்து

வாத்தில் கோழி அன்னம் மயில் போலாகும்

கூரேதான் பித்தத்தில் ஆமை யட்டைக்

குறிப்பாக்ச் சேத்துமத்தில் பாம்புபோற் றவளையாமே”

-வைத்திய சார சங்கிரகம்

“பார்ப்பா குருநாடி ஐந்துக்கு நடுவில்

பாரிநிற்கும் வரலாறு தன்னைக் கேளு

தீர்ப்பா பித்தத்தின் முன்னே நிற்கும்

தசநாடி பத்துக்கும் திறமாய் நிற்கும்

ஏர்ப்பா வாதமென்றுஞ் சொல்வர் மூடர்

இருத்தியங்கே பார்ப்பளவில் வேறாய் நிற்கும்

தார்ப்பா கண்டகுரு நாடி நேர்மை

தனையறிய வகையுனக்குச் சாற்று வேனே”

-பதார்த்த குணசிந்தாமணி நாடி

“சாற்றுவேன் பெருவிரலிற் பூத நாடி

சங்கையில்லா ஆள்தூண்டி வாத மென்க

ஏற்றமுள்ள நடுவிரல்தான் பித்த நாடி

இசைந்ததொரு பௌத்திரமே ஐய மாகும்

தோற்றுகின்றா சிறுவிரல்தான் பூத நாடி

சுற்றுமுள்ள குருநாடி ஐந்துட் சேரும்

மாற்றுமே குரு நாடி ஐந்துட் சேர்ந்து

வளர்ந்து நிற்கும் பேர்பெரிய உண்மை தானே”

-பதார்த்த குணசிந்தாமணி நாடி

“கார்ப்பா உடலுக்கு ஞாயிராய் நின்ற

கருவான குரு நாடி ஒன்று தானே”

“ஒன்றுக்கு மெட்டாத நாடி நேர்மை

ஊடுருவித் தானிருக்கு முண்மை கேளீர்

வண்டுகள்தான் மதுவருந்தும் நேர்மை போல

வாதபித்த சேத்துமத்தின் மதுவை யுண்ணும்

என்றைக்கும் வாத பித்தமையம் நடுவே நிற்கும்

ஏறுவதுங் குறைவதுவு மில்லை யப்பா

கன்றுக்குப் பாலிறக்கும் பசுவைப் போல

காத்திருக்குங் குருநாடி காலைப் பாரே”

-குருநாடி சாஸ்த்திரம் 235

Guru Naadi, like the bee which sucks excess honey from the flower, sucks the excess humour which produces inside the body as a results of both physical and mental activites and it stores in a separate site and secretes whenever a specific humour is needed for the maintainence of the body in equilibrium, like the secretion of milk in the udder of a cow when sees her calf.

“குருநாடி நிலையறியாக் குருட ரெல்லாம்

கூட்டமிட்டுச் சாத்திரத்துக் குவமை சொல்வார்

மறுநாடி வாதபித்த சேத்து மத்தின்

மத்திமமென் றிதையறியார் வார்த்தை சொல்வார்

கருநாடி குருநாடி யாகக் காணும்

கைமுறையாய்க் குருதொட்டுக் காட்டாத் தோன்றும்

பெருநாடி சாத்திரத்தில் மயங்கி டாதே

புலந்தியர்தம் குருநாடி பின்னல் பாரே”

-பதார்த்த குணசிந்தாமணி நாடி

“தம்பமுடன் வாதபித்த ஐயநடு விலேதான்

தமரகம்போ லாடிநிற்கும் குருவி தாமே”

“ஏற்றகுரு நாடிதன்னை இசைந்து பார்க்கில்

இடையும் பிங்கலையுமே இசைந்து மாறி

மாற்றமில்லாச் சுழிமுனையைத் தானே பற்றி

மாறிநிற்குங் கத்திரிக்கை மாறல் போலச்

சீற்றமுடன் வாதபித்த சிலேரோன மென்றே

தசநாடி திரிநாடி தானாய் நின்று

கோற்ற சிறு குருநாடி நிலையைப் பார்க்கில்

கோமான்றன் திருக்கூற்றைக் கூற லாமே”

-பதார்த்த குணசிந்தாமணி நாடி

According to the above verses, *Guru Naadi* is said to be a separate entity. *Guru Naadi* mingles with all the *Pancha Naadis* and strengthens them. Its abode is the centre of the three *Naadi*. It is also directs the three *Naadis*. It is the heart of other *Naadis*. *Gurunaadi* is formed by the combination of *Idakalai*, *Pingalai* and *Suzhumunai* and the *Abanan*, *Pranan* and *Samanan* respectively. It is the cause for breathing. It is the for *Vatham*, *Pitham* and *Kabam*. The power which can keep the body and soul in good condition is *Gurunaadi*.

Diseases in relation to the state of Guru Naadi

1. If *Guru Naadi* unites with *Vatham* and rolls like a leech (*Vatha Naadi* will be lesser in its maathirai), the person is susceptible for vayu (gas), cough, scabies, itches etc.
2. If *Guru Naadi* mingles with *Pitha Naadi* like Annam (swan) (the beating of *Pitha Naadi* will be excess) there will be fever, excess salivation, perspiration, retention of urine and slackness of the extremities
3. If *Guru Naadi* mingles with *Kaba Naadi* like a lion with rage (*Kabha Naadi* will more than its normal range) the condition will be a state of collapse.
4. If *Guru Naadi* pierces into *Kaba Naadi* it will create bad prognosis causing symptoms of death.
5. If *Guru Naadi* totally diminishes, there will be diarrhea, pain in stomach and swelling in the extremities
6. If *Guru Naadi* passes side ways it will dash with *Kaba Naadi* which will cause the increase of *Kaba Naadi*
7. If *Guru Naadi* functions in its proper place, the three *Naadis* namely *Vatham*, *Pitham* and *Kabam* will be in their natural state.
8. If *Guru Naadi* is not in its natural position complications will arise
9. If *Guru Naadi* flutters like locust in *Kaba Naadi*, death might take place.²

1.இடகலை:

“கட்டி நின்ற இடகலையின் மார்க்கம் கேளு
கருதிநின்ற வலக்காலின் பெருவிரலில்
தொட்டு நின்ற குதிகாலில் விசை கொண்டேகி
தொடுத்து நின்ற கத்தரிக்கோல் விசையில் புக்கி
மட்டுறவே இடப்பக்கம் சாய்ந்து சென்று
வகுப்பான செவிகுற்றி மேல் பக்கத்தில்
திட்டமுடன் சுற்றியறிந்த பிடரிபுக்கி
திடமான இட்து காதுள்ளுட்டும்”

வரம் ஓடிவு முறிவு சர சூத்திரம்-1200 (267)

It starts from below the nails of the right great toe. It is the *Naadi* which supplies whole right lower limb and gives energy and strength. It is the only *Naadi* which supplies the right foot like *Pingalai* which supplies the left foot. In foot it forms triangles of energy area and supplies all main varma points of the foot including *Sanni*, *kaal kavuli*, *Patha chakram*, *kaal vellai*, *kaal karandai mani adangal* etc. Since it divides into two branches as major and minor pathways and moves upwards through the legs, and supplies whole part of the knee and thigh and reach in the hip joint, it supplies all the *pradhanam* of the right leg and gives strength to the hip to balance the whole body weight. Since the whole right leg is controlled by the *Idakalai* and any problem in leg affects *Idakalai*.

In *Moolatharam* it strikes with *Pingalai* and produces *Suzhumunai* and goes up through the left half of the body to supply energy to the upper part of the body. In left side it supplies energy to the main Varma points of the abdomen and chest and then supplies to nipples (*Thoosigam*) to form *Ettumuga varmam* and forms a Vattam called *Thoosiga vattam*. It supplies its cold energy to the Heart. Then it gives energy to the main blood vessels of the axilla, and the

vessels in the neck which supplies to the brain and distributes it cold energy in brain and finally ends in the nose though a small fraction of its energy is supplied to the left hand which ends in the tip of the fingers.^{12,13}

2.பிங்கலை:

ஊடாடும் அசவை நிற்கும் வழியுமோடி

உள்ளசவை ஆக்கிராண வழியே சாடும்

கூடாத பிங்கலைதான் இட்துகாலில்

குதிகொள்ளும் பெருவிரலில் குதியிலுற்று

ஆடாத கத்தரிக்கோல் விசையில் நின்று

அணிந்திளகி வலது பக்கத்துள்ளுடாடும்

நாடாத கபாலவரை சுற்றிமேள

நளினமுடன் மணிபந்த அசவைக்கட்டில்

வரம் ஒடிவு முறிவு சர சூத்திரம்-1200 (268)

Pingalai Naadi pathway is same as that of *Idakalai*, starts from below the nails of the left great toe. It supplies to the left foot and whole left leg like the *Idakalai* supplies the right foot and leg. It produces *Suzhumunai* striking with *Idakalai* in the *Moolatharam*. The supply of *Pingalai* in abdomen and in chest is also same as that of *Idakalai* only the difference is it crosses the *Naduvidam* to supply its hot energy to the Heart, which is situated in the *Chandra pradhanam*. Remaining pathway in the upper part is also same as that of *Idakalai* and finally ends in the nose and a small part is supplied to the right hand and ends in the tip of the fingers.^{12,13}

3.சுழிமுனை:

அசவை வழி கட்டுண்டு பெருவிரலில்
அறிந்திரிக்கும் பின்கலை என்றறிந்து பாரு
நிசமான சுழிமுனை தான் மூலக்குய்யம்
நின்றிலங்கும் கத்தரிக்கோல் நடுவிலுற்று
வசமான நெறுக்கெலும்பின் பின்பாகத்தில்
வகுத்திரிக்கும் நடுத்தாரை வழியே யேறி
குசமான மதி வளரும் தலத்தில் புக்கி
குய்ய முனையாகி நிற்கும், குறித்துப் பாரு
குறிப்பான காலமது கொள்ளும்போது
கூண்ட நடனம் புரியும் விசை தளர்ந்து
மறிப்பான நாதவிந்து விசை விட்டேகி
மாறிவந்து பிராண கலைசிக்கல் கொண்டு
பொறிப்பான பஞ்சகர்தான் நிலை பிசகி
போனதினால் அறிவொடுங்கி மதியில் புக்கும்
மறுத்து வந்து பிராணகலை நாசி முளை
மட்டுறவே நின்றதினால் உணர் உண்டாமே”

வர்ம ஓடிவு முறிவு சர சூத்திரம்-1200 (269, 270)

It is called as *Gnananilai Nirai Naadi* as it is related with spiritual aspects of the body. It unites the body with mind and has a significant role in inner awakening and to attain salvation. It is originated in *Moolatharam* as a result of the striking of *Idakalai* and *Pingalai Naadi*. Since it is originated from *Idakalai* and *Pingalai* it has both the character of *Idakalai* and *Pingalai* in a balanced form. It starts from a *Munai* (end) and ends in another end and so called as *Suzhumunai*. It is *Moolavattam* which normalizes this naadi initially and goes upwards by supplying all main parts in the *Nadavidam pradhanam* including *Mudichu*, *Paduvarmam* etc. It is abalancing force which controls both *Idakalai* and *Pingalai* and thus maintains the temperature of the body and thus protects the pranana, the life force.

It supplies all the parts of the vertebra and *mudichu* so that it strengthens the vertebral column, spinal cord and associate nerves and also controls the impulses which pass from the brain to the lower part of the body. It is the *Suzhumunai* which supplies each and every part of the Brain and acts as a magnetic force or electric current in the brain. *Suzhumunai* has a strong connection with the mind and any problem in *Suzhumunai* affects mind also.^{12,13}

4.சிங்குவை நாடி

உண்டான சிங்குவையாம் நாடி தானும்

உண்மையற்று மூங்கில் வட்டத்தடியில் தோன்றி

கண்டாயே பிரிவெட்டாய் தொப்புல் சுற்றி

கடந்தெட்டாய் குடலில் புக்கி தாங்கியாறாய்

விண்டதொரு குலைவழியே ஏறிமாறி

மிகு அடப்பு வழி புஸ்பதியைச்சுற்றி

கொண்டெழுந்து பிரிவொன்றாய் தொண்டையூடே

குலமான உண்ணாக்கைப் பற்றி நிற்கும்.

வரம் ஓடிவு முறிவு சர சூத்திரம்-1200 (271)

“உண்டான சிங்குவை தான் நாடி தானும்

உள்ள மூங்கில் வட்டமதனடியில் தோன்றி

கண்டாயோ பிரிவெட்டாய் குடலில் புக்கி

காரணமாய் நின்றதொரு கலையினுள்ளே

விண்டதொரு காரீரல் தன்னில் தாவி

விசையான தடப்பென்ற திரையில் நின்று

தாண்டிய யெழுந்தாறு கவராய் சிக்கி

தொண்டையுடனுண்ணாவைப் பற்றி நிற்கும்”

வரம் ஒடிவு முறிவு சாரி சூத்திரம்-1500

It is mainly present in trunk region and in three *kandams* of the body except hands and legs. It acts by combining with *Udhanan vayu* and spreads in intestinal part, chest region and throat region. It originates in the *moolatharam* and to the umbilicus through the upper part of the *moongil vattam* so that it gives energy and strength to the whole part of the *moongil vattam*. It gives energy to all the six *pradhanam* (*soorya, chandira, naduvidam, Mun, Pin, Nadu pradhanam*) in the abdominal area including stomach, liver, small intestine and large intestine and thus balances the body. From the umbilicus it goes to *Koombu* and supplies heart and thorax and to the either side of the neck and ends in uvula. It has a main role in the movements of the gastro intestinal tracts including the ingestion and excretion of the waste materials. It also spreads in the thorax and supplies energy so that it maintains the fuction of the lungs and heart.^{12,13}

5.அலம்புருடன்

“பற்றுகின்ற அலம்புருடன் குதிகால் தன்னில்
பாலகனே அதிலிருந்து கவர் மூன்றாகி
சுற்றுமே சந்தடியின்பொருந்தின் கீழாய்
துதிமூலம் வட்டமதி லெட்டா ஏறி
தெற்றாமல் அரஞ்ஞணம் போல் தொப்புள் சுற்றி
திரை கடந்து பதினாறாய் திரும்பி நின்று
பற்றுறவே புஜத்தடியில் பித்துக்காயில்
பலமான சென்னி பிடரி விலாவிலேறி.
ஏறியே செவியோரக் குழியில் தாவி
இருந்திளகி பக்க மொன்றது தானப்பா
மாறியே நாற் கவராய் தாண்டிச்சுற்றி
மதிவழியே கபால வரையிலேறி
தேறியே அமிர்த புஷ் கரணிக்குள்ளே
சென்று சிவகலை நாலில் தொடர்ச்சியாகி
பாரிலே பைக்குழியிலூடு தாவி
பாகனே வலது கண்ணை தொட்டு நிற்கும்”

-வரம் ஓடிவு முறிவு சர சூத்திரம்-1200 (272, 273)

Also alled as *Alampudai Naadi*. It spreads all over the body and gives energy except hands. It starts from the heel (*Kuthikaal*- Achilles tendon) and reaches to the hip joint by supplying the entire lower limb by dividing into three divisions as outer, inner and intermediate branches to supply entire leg below knee, and uniting all the three branches in knee and then again three branches in thigh as one to bones, then to nerves and third to blood vessels. It supplies to the skin also. It indicates *Alampurudan* has a major role in supplying energy in all the parts of lower limbs. From hip joint it moves to *moolavattam* and strikes over there and supply energy to joints, muscle, ligaments and tendons of the sacro iliac joint and pelvic bones. It also supply to the coccyx and nerves related to the genitals which indicates its strong relation with the sexual activities. Then after reaching umbilicus it divides into 16 parts among these important one goes to the Kidney. Remaining 12 branches are moves through the lateral part of the thorax to supply the lateral parts of the lungs. And finally supplies inside the brain and ends in right eye. Another 4 branches from umbilicus supplies to the anterior part of the lungs and diaphragm and then supplies the axilla. Another two branches goes up through the central part of the thorax, through the clavicle goes up and ends in right eye.^{12,13}

6.காந்தாரி

"நிற்குமந்த காந்தாரி இட்து கண்ணில்

நின்றெழுந்து எண் கவராய் துணை மூளைக்கும்

புக்கியே காதடியின் பிடரியூடே

புகுந்து பூரகத்திடையே லாட்த்துள்ளே

சிக்கெனவே கவர் நாலாய் முடிச்சி சுற்றி

திரும்பி ஒன்பதாய் யிக்குலையை சார்ந்துலாவி

தக்கதொரு பித்துக்காய் தனிலே ஒட்டி

சறுகியே பித்தநிலை அஞ்சுக் கேகும்

ஏகியே ஐங்கவராய் பிரிந்து நின்று

இயல்பக்குவாசயம் ஆமாசயத்தைச் சுற்றி

வாகு பெறாமல் மலாசயத்தைச் சுற்றி

மருவினது ஏழு கவராய் வரிசையாக

தாகுபெற நாங்ஙணத்தின் பூட்டை சுற்றி

சந்து வழி தூங்கு சதையுள்ளுடாடி

ஆகமுற குதிகாலில் எழுந்து பின்னி

அதிலப்பா காந்தாரி நாடிநிற்கும்”

வரம் ஓடிவு முறிவு சர தூத்திரம்-1200 (274,275)

It is the only *Naadi* which has its pathway downward direction. It originates from the left eyes and forms 8 divisions (4 to each part) after giving energy to the left eye and travels through the both sides of the brain and reaches *Pidari* after giving sufficient energy to the brain through *Senni*, *Sevikuttri*. From *Pidari* it forms many branches to all directions including *Kondaikkolli*, *Seerum kolli*, *Suzhiyadi*, *Thilartham* etc and forms *Pidari vattam* so that it balances the the Skull and associated structures. Then it has a significant role in supplying energy to the *Panchavarna guhai*, includes Trachea, bronchi, Lungs, Heart, Liver, Paereas, Spleen etc. Then its supply is to both Kidneys and has significant role in maintaining the proper functioning of kidneys. Again it is return back to supply Gall bladder, from there it is divided in to five parts. 1. Stomach and duodenum 2.Small and large intestines 3. Kidney and associated excretory organs 4.Sexual organs 5.Sacro coccygeal area. It gives energy to the muscles and ligaments associated with sacrum and coccyx and reaches to the hip joint.Then it goes down by supplying the thigh knee and ends in heel. It supplies to the whole part of the thoraco abdominal organs and genitals.^{12,13}

7.புருடன்

நாடியே புருடன்வன் மூலத்தண்டில்

நழுகியே பூணெலும்பைச் சுற்றியாறாய்

கூடியே பீசமதினடி யூடாடி

குணமான இந்திரியப் பையைச் சுற்றி

நாடியது ஓராறாய் உந்திப்புக்கி

நலமான பிறதாரை வழியே ஏறி

வாடாமல் கல்லிடையின் அகமேதாவி

மண்ணை நாக் கடியினுமே மருவலாகும்

மருவியே காரீரல் கசப்புப் பையில்

வகைவகைக்கு ஒன்பதென மருவலாகும்

உருகியே உட்புகுந்து திரை பூட்டுக்கு

உறுதியதாய் ஊக்க எல்லை தாங்கி நிற்கும்

வெருவியே எண்கவராய் தொண்டையின் மேல்

மெல்ல மெல்ல கொக்கி பிற பட்சிக் கெல்லாம்

பருகியே ஆதாரச் சுற்றலாகி

பரிந்துண்ணாக் கதில் நின்று பிரிவு மூன்றே.

மூன்றாகி இடகலை பின் சுழியோடொட்டி

மூதண்ட மதிலேறி மூளைசுற்றி

ஊன்றாகி புஷ்கரணி ஓடைதாங்கி

உற்றதொரு ஓர்மையதில் உறுதியாகி

போன்றாத அடுக்கு சிவமாறல்க் கெல்லாம்

பொருத்தமுற்று காதடியின் தொண்டை ஒட்டி

சான்றோர்கள் உரைகேட்க நிமிசமாக

சாரும் வலக் காததனை சுழிந்து நிற்கும்.”

வரம் ஓடிவு முறிவு சர துத்திரம்-1200 (276,277,278)

Purudan Naadi originates from the *moolatharam* and mainly supplies to the sacro coccygeal area and its associated area and *Paasamudichu*. Then its pathway from the *Paasa mudichu* to the genitals is very important that it has a significant role in reproduction in both male and female. In male it supplies mainly the testicles and scrotum and in female it supplies the clitoris and vagina. It has a significant role in sperm production. After supplying genitals and associated area it goes up to supply the abdominal organs like kidneys, Pancreas, Liver and Gall bladder. It gives support to the thorax and balances it. It supplies to 6 *Adharam* and spreads the energy of the *Adharam* for the benefit of the body and soul. It supplies to the *Kokki*, *Pirai* and *Patchi* in throat like a magnetic field and spreads that energy through the *Vaasi* all over the body. Then it has connection with *Idakali*, *Pingalai* and *Suzhumunai* and spreads the energy to the brain. Then it supplies to the mandible and associated area and fills its energy and finally ends by spreading around the right ear and gives energy.^{12,13}

8.அத்தி

“சாற்றுகிறோம் அத்தி எனும் நாடியொன்று

சார்பான மூங்கிலெனும் வட்டத்தின் மேல்

சாற்றுகிறோம் குண்டெலியின் மேல் பாகத்தில்

தப்பாத மயிர் பாலம் தன்னிலேதான்

சாற்றுகிறோம் பிரிவு நூற்றாற்தாக

தக்கதொரு நாபி என்ற கமலம் தன்னில்

சாற்றுகிறோம் முதுகு வரி நட்டெல் நேரே

தானான பிடரி முடிச்சடிமேல் ஏறி.

ஏறியே பதப்பின் கீழ் ல்லாடந் தன்னில்

எண்பத்து நால் கவராய் எழும்பிக் கொண்டு

மாறியே அமிர்த மென்ற கலசத்துள்ளும்

மைந்தனே பிறையாக நிற்கும் கண்டாய்

கூறாக தசநாடி பத்தின் மேலே

குருநாடி ஒன்றுண்டு கூர்ந்து பார்த்தால்

ஆரறிவார் சொல்லுகிறேன் அறிவுள்ளோர்க்கு

அதன் விபரம் ஆராய்ந்து அருளுவேனே"

வரம் ஒடிவு முறிவு சர சூத்திரம்-1200 (282,283)

Athi naadi is mainly present in the posterior aspect of the body mainly from low back to head and in anterior part it supplies fore head, nose, eyes and mouth. It is originated from the navel and travels to the sacrococcygeal area through the *Moongil vattam*, an area of energy situated in between navel and *moolatharam*. It gives energy to the *moongil vatttam* so that helps to maintain the central balance of the *moongil vatttam*. During the ascending course of the *Naadi* through the posterior aspect of the body it supplies energy to all the vertebrae, associated bones like hip bone, ribs etc, nerves and plexes arising from the vertebrae and brain. One speciality of these *Naadi* is it supplies energy to all the *Mudichu* (*Karunadhi mudichu, Valai mudichu, Thunnal mudichu, Paasa mudichu, Kumbaga mudichu*). After reaching head it supplies energy to all part of the skull bone. It has a special role in the functioning of the eyes like vision, movements of the eyebrows, tear secretion etc, and mouth like the closing and opening of the mouth etc. So we can say that *Athi Naadi* is mainly present in the *Keezhpradhanam Naduvidam* of the body.^{12,13}

9.சங்கினி

“சங்கினியாம் நாடியது லிங்கம் தன்னில்

தயவான கத்தரிக்கோல் அடியினூடே

தொங்கு குலை புகுந்து நின்ற அடப்பக்காலம்

தோகையரே முடிச்சென்ற பிடரியின் மேல்

மங்களமாம் ஆறு ஆறு கவராக வீசி

வகைவரில் ஒன்றுக்கு ஈரெட்டாகி

தங்கியே உச்சியின் நேர் பதியைத்தொட்டு

சங்கினிதான் நிற்குமென்று சாற்றினோமே”

வரம் ஓடிவு முறிவு சர சூத்திரம்-1200 (281)

A *Naadi* related with genitals and brain. It originates from the base of the penis in male and in the vaginal orifice in female. Since it supplies the whole external, internal male and female genitalia. It has a specific role in erection, libido, increases the quality of sperm and semen in male and gives strength to the birth canal and associated organs. It has a significant role in the fusion of sperm and ovum and fertilization. It also branches in brain and do the functions related with copulation like desire, libido, stimulation of the sexual organs and its secretions.

It supplies urinary bladder; it arrests the act of micturition during copulation and arrests the sexual desire during the act micturition. It supplies the whole part of the brain and forms *vattangal* (the magnetic circles of energy) in brain and maintains the shape of the body, controls many functions of the body including the act of swallowing of food, movements of mouth during speech etc.^{12,13}

10. குகு நாடி

“சுழிப்பாகி குகுத்தோற்ற நாடிக்குள்ளே
தொடுத்து கதிர் மூலமதில் சாடிப்பாய்ந்து
விழிப்பாகி எண் கவராய் சுருக்கோடாகி
மேவிநவதுவாரத்து மொன்பதாகி
களிப்பான நடையதில் விசையதாகி
கவர்போல நார்க்கவராய் பெட்டிக்கேகி
பழியகல மண்ணை நாக்கதனில் சார்பில்
பன்சவரண குகைநடுவினூடே சாடி
சாடியே வியானனதி லொன்பதாகி
சதிகரண கிரமமதை சுழந்துள்வாசி
நேடியே மேலாக கவராறாகி
நிரந்துவிடம ருவுமணி மஞ்சமேறி
கூடிவிட செவிமூக்கு நயனம் நாக்கு
கொழுகி மிக ஞானப்பிற காசம் சுற்றி
தூடியது தாங்கி நிலையாக நிற்கும்
தொகுத்துரைத்தேன் சங்கினியின் நாடி கேளே”

வரம் ஓடிவு முறிவு சர தூத்திரம்-1200 (279, 280)

Guhu Naadi starts from the umbilicus and goes to *moolatharam* and supplies energy to the *moolavattam* and supplies to the part adjacent to the sacral area. Then it supplies to the 9 orifices of the body so that it controls the proper functioning of the 9 orifices of the body. It gives special energy to the urethral and anal orifices and to pancreas. After supplying all the orifices the energy unites to supply the thoracic cage and it controls the act of respiration and *Vasi*. It has a special role in spiritual aspects of the body.^{12,13}

6. LOCATIONS OF THREE HUMOURS AND MANDALAM

Locations of Vatham (வாதத்தின் இருப்பிடம்)

“நெளிந்திட்ட வாதமபானத்தைப் பற்றி

நிறைந்திடையச் சேர்ந்து நதிக்குக் கீழே நின்று

குளிர்ந்திட்ட மூலத்தூடெழுந்து காம

கொடியிடையைப் பற்றியெழுங் குணத்தைப் பாரே”

“குணமான எலும்புமேற்றொக்கை நாடி

குழாமாகு மெழுபத்தீ ராயிரத்தைச் சேர்ந்து

நிணமான பொருந்திடமும் ரோமக்காலும்

நிறைவாங்கி வாங்கிஷமெல் லாம்ப றந்து

மணமான வித்துவிழ மலநீர் பெய்ய

வழிகாட்டிக் கால்நாட்டி வாதமெங்கும் கலந்துதானே”

-வைத்திய சதகம்

According to the *Vaidhya sathakam*, Vatham dwells in the following places

Umbilicus, Rectum, Faecal matter, Abdomen, Anus, Bones, Hip joints, Skin, Navel plexes, Joints, Hair follicles, Idakali, Abanan and muscles.^{2,3,4,6}

“அறிந்திடும் வாத மடங்கு மலத்தினில்”

-திருமூலர்

“நாமென்ற வாத்த்துக் கிருப்பிடமே கேளாய்

நாபிக்குக் கீழென்று நவில்லாகும்”

-யுகி முனிவர்

According to Saint *Thirumoolar* and *Yugi Muni*, the places of *Vatham* are the anus and below the navel region.

Locations of Pitham (பித்தத்தின் இருப்பிடம்)

“தானான பித்தம் பிங்கலையைப் பற்றி

சாய்வான பிராணவாயுவு தன்னைச்சேர்ந்து

ஊனான நீர்ப்பையில் அணுகி மூலத்

துதித்தெழுந்த அக்கினியை உறவு செய்து

மானேகே ளிருதயத்தி லிருப்புமாகி

மயலாகி நினைவாகி மயக்கமாகி

கானான சிரந்தனிலே இரக்கமாகிக்

கொண்டு நின்ற பித்த நிலை கூறினோமே”

-வைத்திய சதகம்

“பிரிந்திடும் பித்தம் பேராஞ் சலத்தினில்”

-திருமூலர்

“பேமென்ற பித்தத்துக்கிருப் பிடமே கேளாய்

பேரான கண்டத்தின் கீழ் தாகும்”

-யுகி முனிவர்

According to the *Vaidya Sathagam*, the *Pingalai*, urinary bladder, stomach, heart and the head are the places where *Pitham* sustains. In addition to the above places the umbilical

epigastric region, stomach, sweat, saliva, blood, essence of food, eyes and skin are also the places where *Pitham* sustains.^{2,3,4,6}

Thirumoolar and *Yugi muni* says that *Pitham* sustains in urine and the places below the neck (Lower part of the trunk region).

Locations of Kabham (ஐயத்தின் இருப்பிடம்)

“கூறினோம் சிலேற்பனமது சமான வாயு

கொழுகியடா சுழுமுனையைப் பற்றி விந்தில்

சீறியே சிரசிலாக் கிணையைச் சேர்ந்து

சிங்குவை அண்ணாக்கு நிணமச்சை ரத்தம்

மீறியே நிறங்கோணம் நரம்பெ லும்பில்

மேவியதோர் மூளைபெருங்க் குடலிற் கண்ணில்

தேறியதோர் பொருந்திடங்க ளெல்லாஞ் சேர்ந்து

சிலேட்டுமமது வீற்றிருக்குந் திடங் கண்டாயே”

“மறிந்திடு மையம் வசிக்கும் விந்துவில்”

-திருமூலர்

“தேமென்ற சேட்பமது சிறந்திருக் குந்தான்

செயலான வச்சிக்குக் கீழ் தாமே”

-யுகிமுனிவர்

Head, tongue, eyes, nose, throat, thorax, bone, bone marrow, joints, blood, fat, sperm and colon are the seats of *Kabam*. It also lies in the stomach, spleen, pancreas, chyle and lymph.^{2,3,4,6}

MANDALAM

As per the 96 thatwas, human body is divided in to 3 regions called mandalam. They are

- 1.Akkini Mandalam
- 2.Aathitha Mandalam
- 3.Chandra Mandalam

அக்கினி மண்டலம்

“உண்மைபெறும் பிரிதி வியின்மேல் அப்புவின கீழ்

உற்றமனை நால் சதுரம் சுவாதிட்டானம்

இன்பமுடன் திரிகோணல் மலரதுண்டு

இதழ்தனிலே நான்கு நிறம் செம்மையாகும்

அன்பு பெறுமேருவினடி மூலமாகும்

அரியதோர் அக்கினியின் மண்டலம் தான்

துன்பமணுகாதே அம்மனையை நோக்கி

சுகமாக இருந்து தவம் செய்குவாயே”

வர்ம ஓடிவு முறிவு சர சூத்திரம்-1200

This is located at the place where the *prithivi* (Earth) and the *Appu* (Water) meet in a square, a triangle in the centre, the Lotus with four petals formed within. This is found two fingers breadth above the *Moolatharam*.^{2,3,6,12}

ஆதித்த மண்டலம்

“தவம் புரியும் அக்கினி மண்டலத்துக்கப்பால்
தக்கதொரு குலையினடி மத்தியத்தில்
பவிசு பெறும் இருதய கமலத்துள்ளே
பகருமறு கோணமுனை இதழீரெட்டு
நவமணிபோல் பளிங்கினொளி யதோர் முகமாய்
நலமான அரம்பையுடைய முகத்தை போல
தலமான பெண் சக்தி யோடே ஒத்து
தானாதித்திய மனைநோக்கி துதி செய்வோமே”

வரம் ஓடிவு முறிவு சர துத்திரம்-1200

This is found in the heart centre of six pointed hexagon with lotus with eight petals. This is just like banana flower facing downward located four finger breadth above the umbilicus.^{2,3,6,12}

சந்திர மண்டலம்

“துதிபுகழும் ஆதித்தியன் மனைக்கப்பாலே
சொல்லிய கபாலவரை நடுக்கொடிக்குள்
கதிபெறவே பாரமிற்த கலைதானூறும்
கருது பன்சாட்சரத்தில் ரவி மதியுமொத்து
மதியுனுடைய மண்டலமே பாயும் வீடு
மகா மேருவில் மனம் நிறுத்தியுற்றுப்பாரு

பதிபுகழும் கூடர் ரெவிமதிகள் மூன்றும்

பரம் பாழ் சிவம் பாழ் சக்தி பாழ் வழியே”

வரம் ஓடிவு முறிவு சர சூத்திரம்-1200

This lies in the centre of the eyebrows from where emerges brightness like that of millions of moons and stars. The Ambrosia stands facing downwards; the *Agni* stands downwards and the *Parasakthi* stands in the centre.^{2,3,6,12}

7. PRADHANAM AND NAADI DIFFERENTIATION

Body is divided into different planes and sections based on the pathway of the *pranam* or *Dasanaadi* and the concept of division of body into different planes is called *pradhanam*. It determines the pathway of the *Dasanaadi* and normal body postures. There are six *pradhanam*

1. Soorya pradhanam (Right side)
2. Chandra pradhanam (Left side)
3. Naduvida pradhanam (Central part- Sagittal section)
4. Mel pradhanam (Front side)
5. Keezh pradhanam (Back side)
6. Nadu pradhanam (Central part- Coronal section)

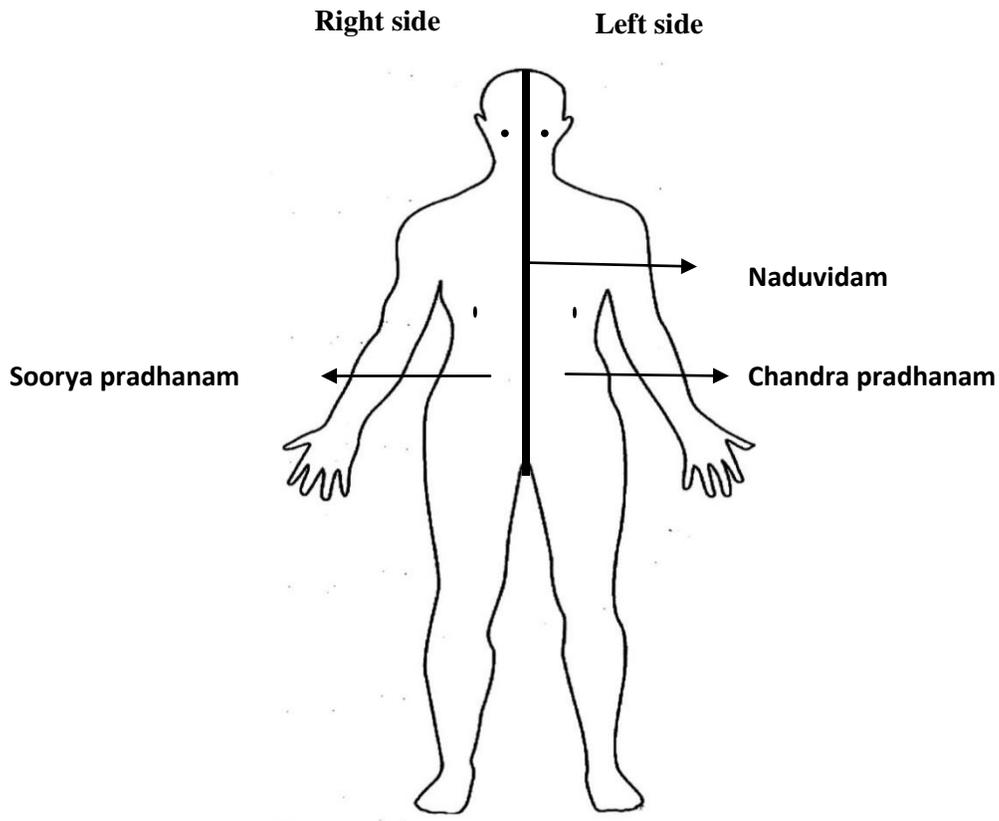


Figure: 1 Pradhanangal sagittal section

Table: 4 Pradhanangal

Sagital section	Coronal section
1. Soorya pradhanam	4. Mel pradhanam
2. Chandra pradhanam	5. Keezh pradhanam
3. Naduvida pradhanam	6. Nadu pradhanam

Sagital section planes:

When the body is divided in sagital plane from vertex to coccyx there will be two halves, the right and left. The right half is called as *Soorya pradhanam* and the left half is called as *Chandra pradhanam*. The area separating both *Soorya* and *Chandra pradhanam* is called *Naduvidam*.

1. Soorya Pradhanam

It is the right half of the body where the influence of the Sun is more and has the quality of heat. It is determined by the *Pingalai* since its pathway is restricted to this *pradhanam* only.

2. Chandra Pradhanam

It is the left half of the body where the influence of the Moon is more and has the quality of cold. It is determined by the *Idakalai* since its pathway is restricted to this *pradhanam* only.

As per the *Arthanareeswara* concept the left half of the body is female, cold in nature and right half is male, hot in nature. *Idakalai* and *Pingalai* determines this differentiation and it is the *Suzhumunai* that balances the temperature of the body. But in legs since there is no *Suzhumunai*, *Idakalai* starts in the right great toe and *Pingalai* starts in left great toe and supplies to the whole right and left leg respectively.

3. Naduvidam

It is the area that separates the *Soorya* and *Chandra pradhanam* and is the central part of the body in sagital section. It has the area of four finger breadths in body parts and two finger breadths in head and neck. Since it is present in between the *Soorya* and *Chandra pradhanam* it acts as a barrier and prevents the penetration of heat towards the *Chandra pradhanam* and cold towards the *Soorya pradhanam*. Thus it balances the body temperature in equilibrium. It is

through this *Naduvidam* the pathway of the *Suzhumunai* goes up and so *Naduvidam* is controlled by the *Suzhumunai saram*. Moreover important *Paduvarmam*, *Adharam*, important locations of the *Dasavayu* are located in this *pradhanam*. Any derangements in this *pradhanam* will affect the *Vattangal* (வட்டங்கள்) and will result in deformity.

Coronal section planes:

When the body is divided in a coronal plane from vertex to foot there will be two halves, the anterior (Front) and posterior (Back). The anterior half is called as *Melpradhanam* (*Mun pradhanam*) and the posterior half is called as *Keezh pradhanam* (*Pin pradhanam*). The area separating both *Mel* and *Keezh pradhanam* is called *Nadu pradhanam*. All the three coronal section *pradhanam* contains *Soorya*, *Chandra pradhanam* and *Nadu vidam*.

4. Mel Pradhanam

It represents the anterior part of the body. It includes *Mun Soorya pradhanam*, *Mun Chandrapradhanam* and *Mun Naduvidam*. It contains the coldness of *Chandra pradhanam*, Hotness of *Soorya pradhanam* and the equilibrium state of *Naduvidam*.

5. Keezh Pradhanam:

It represents the posterior part of the body. It includes *Pin Soorya pradhanam*, *Pin Chandrapradhanam* and *Pin Naduvidam*. It also contains the coldness of *Chandra pradhanam*, Hotness of *Soorya pradhanam* and the equilibrium state of *Naduvidam*. This area contains *mudichu* and the nerves originating from it.

6. Nadupradhanam:

It is the area situated in between *Mel* and *Keezh pradhanam*. It includes *Nadu Soorya pradhanam*, *Nadu Chandrapradhanam* and *Nadu Naduvidam*. It has a main role in maintaining the balance of the body.^{8,13,14}

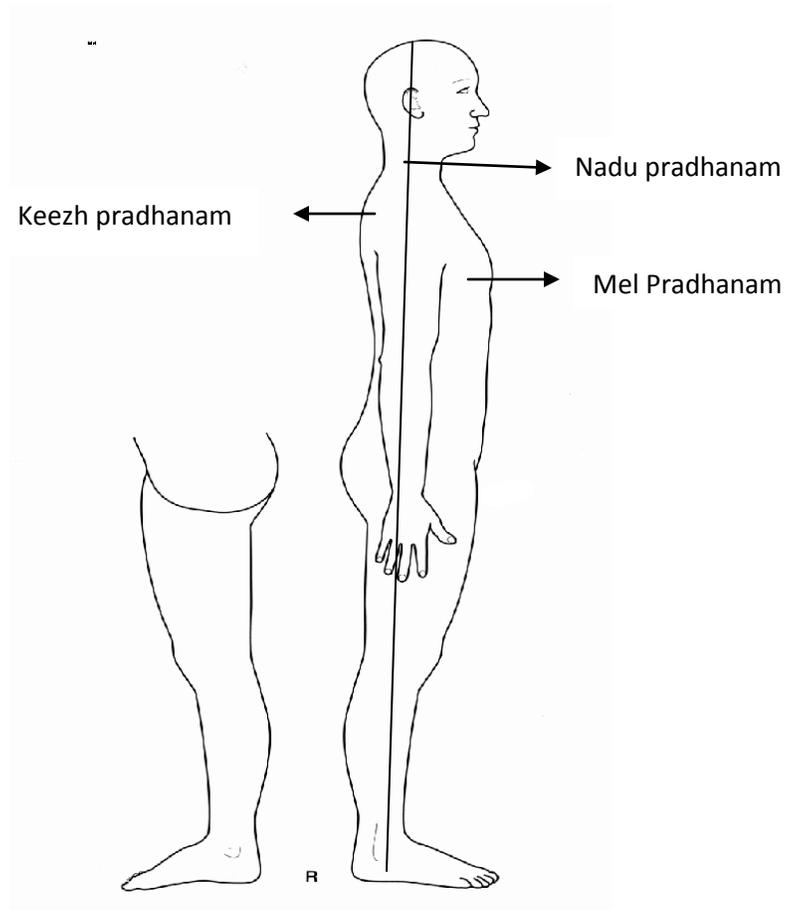


Figure: 2 Pradhanam coronal section

Each regions (*Vali, Azhal, Iyyam*) of the body is divided into three equal parts

1. Upper(U)
- 2.Middle(M)
- 3.Lower(L)

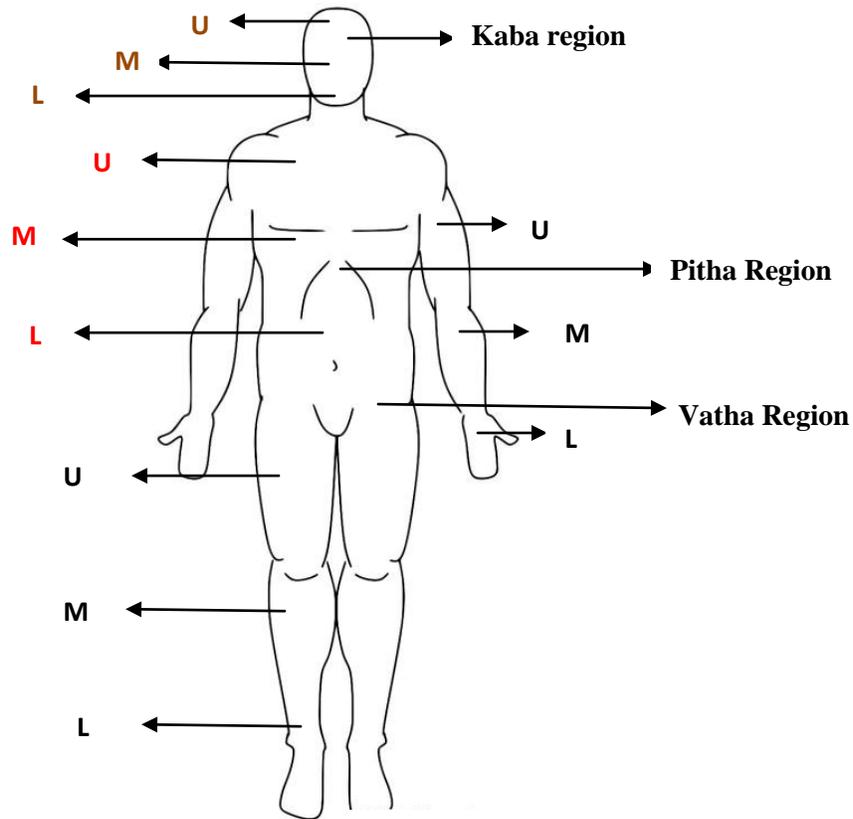


Figure: 3 Regions of the body

In the same manner fingers are also divided into three equal parts from lateral to medial in such a way that lateral part of the fore finger corresponds to the lower part (L) of the *Vatham* region, middle part corresponds to the middle part (M) of the *Vatham* region and medial part corresponds to the upper part (U) of the *Vatham* region. In the same manner middle and ring fingers are divided into three parts corresponds to the Lower (L), Middle(M) and Upper(U)¹³

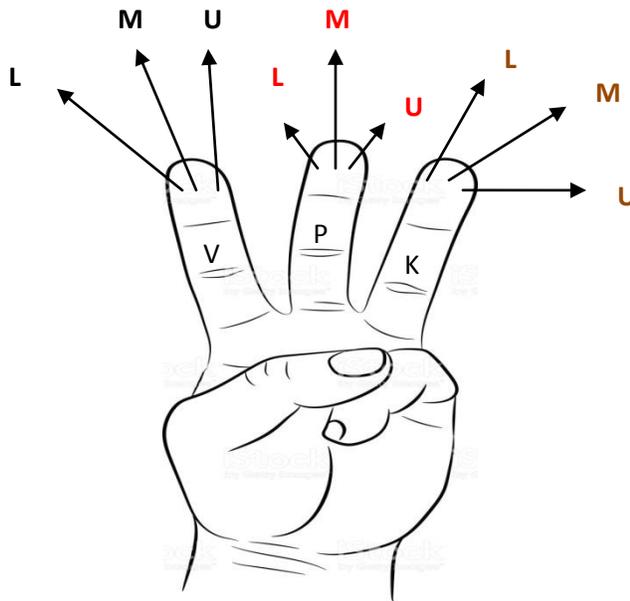


Figure: 4 Regions of the body in hand

These regions both in body and fingers are marked as

Vatham:

Upper part – V1

Middle part –V2

Lower part –V3

Pitham:

Upper part – P1

Middle part –P2

Lower part –P3

Kabam:

Upper part – K1

Middle part –K2

Lower part –K3

The area in between Vatha and Pitham: VP

The area in between Pitham and Kabam: PK

Anterior to Vatham: V0

Posterior to Kabam: K0

These *Pradhanam* can be measured by reading the *Naadi* in such a way that the pulsation felt towards the medial side is *Soorya pradhanam*, pulsation felt towards the lateral side is *Chandra pradhanam* and the pulsation felt in between these *Soorya* and *Chandra pranana Naadi* is *Naduvidam*. The pulsation felt superficially is *Melpradhanam*, deep pulsation is *Keezh pradhanam* and pulsation in between these *Mel* and *Keezh pradhana Naadi* is *Naduvidam*.¹³

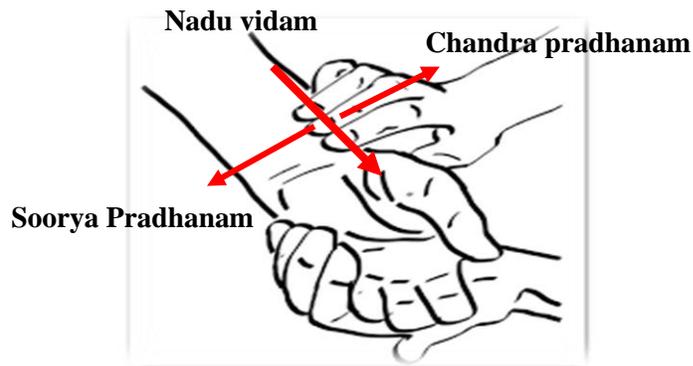


Figure: 5 Pradhanam differentiation



Figure: 6 pradhanam differentiation



Figure: 7 Pradhanam differentiation

Upper, middle and lower parts of body in each finger are divided into 9 parts. Totally 27 divisions in each finger

soorya melpradhanam	soorya nadu pradhanam,	soorya keezh pradhanam
naduvidam melpradhanam	naduvidam nadu pradhanam	naduvidam keezh pradhanam,
chandra melpradhanam	chandra nadu pradhanam	chandra keezh pradhanam ¹³

Kandangal:

Body is divided in to 5 parts called *kandangal*. Body is divided on the basis of *Kandangal* after the birth but *Mandalangal* are formed during the intra uterinre life itself.¹³

5 *Kandangal* are

1. முதல் கண்டம் (1st part) = Head and Neck
2. இரண்டாம் கண்டம் (2nd part) = Trunk
3. மூன்றாம் கண்டம் (3rd part) = Navel to Genitals
4. நான்காம் கண்டம் (4th part) = Hands
5. ஐந்தாம் கண்டம் (5th part) = Legs

KANDANGAL

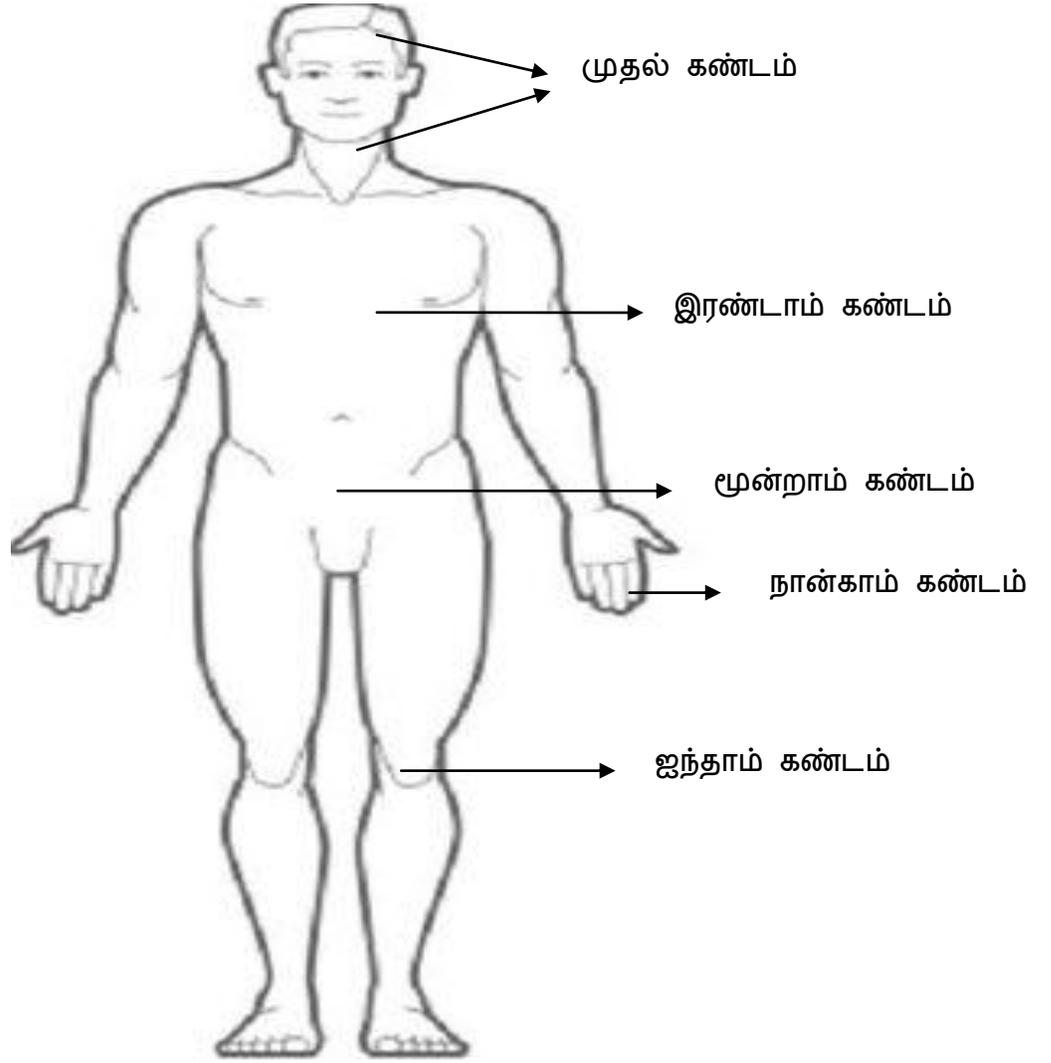


Figure: 8 Kandangal

8. PULSE IN MODERN SYSTEM

The arterial pulse is the transmission of pressure changes in a wave form through the arterial wall and blood vessels from the heart to the peripheral part of the body. Ventricles pushes sufficient amount of blood into the aorta during each ventricular contraction and it pushes the blood forward by the distension of its walls. As a result of this blood flow waves of pressure advances along the arterial tree with a systematic and specific force of jump and that can be palpated by the tips of the fingers by placing it over the course of the blood flow/artery. From the main arteries the waves of pulse (central arterial pulse) is transmitted as peripheral arterial pulse to the peripheral arteries. It is the elasticity of the blood vessels which plays a main role in the formation and transmission of the pulse wave. Normally the arterial walls are more distensible and the transmission of the pulse wave is less and so the pressure will not rise much. But in old age or due to any diseases the elastic property of the arterial wall will lose and it become rigid and the pressure rise and transmission of pulse will be more. The nerves both sympathetic (vasoconstrictors) and parasympathetic (vasodilators) which supplies the blood vessels regulates the contraction and dilatation of lumen of the blood vessels respectively. By the influence of the certain humoural agents and impulses from the central nervous system carries all these factors .

The pulse wave transmits at a greater velocity than the velocity of blood flow and the average velocity of pulse varies between 7 and 9 meters/second. But the blood flows in a maximum velocity of 50cm/second in the body (in large arteries). The pulse is felt in the arteries after a short period from the beginning of ventricular systole and this delay is very small and by accurate recording only it can be measured. This delay is directly proportional to the distance of the blood vessels from the heart.¹⁵

Methods of Recording Arterial Pulse:

1. By Using Manometer

A canula is being inserted into the dissected artery of the animals and the canula is connected to a manometer or any recording instruments for recording the pulse.

2. By Using Dudgeon's Sphygmograph

It is used by tying on the wrist like a small plate rests on the skin over radial artery.. Arterial wall movements are magnified by a series of levers and it is recorded on a moving strip of smoked paper. By the arrival of electronic pulse transducers this instrument is outdated.

3. By Using Electronic Pulse transducer

This is tied on the finger. The device propels light on the blood vessel through skin. The sensor of the device will deduct the reflected light from the flowing blood. By connecting the transducer to recording device similar to polygraph, the alteration in frequency of reflected light is amplified and recorded. This device will show finger pulse volume which indicates the arterial pulse tracing.¹⁵

Interpretation of Arterial Pulse Tracing:

Peripheral pulse is recorded in the radial artery or femoral artery. The pulse is the typical. Detecting the peripheral pulse has three main features.

1. Ascending limb

It is called anacrotic limb or primary wave. It is because of the increase in pressure during systole.

2.Descending limb

Its another name is catacrotic limb. It is because of decrease in pressure during systole.

3.Catacrotic notch

A small notch appears in the upper part of the catacrotic limb. It is called catacrotic notch or incisura. The semilunar valve closes at the beginning of the diastolic period. During the sudden closure of these valves will leads to back flow of the blood which produces slight increase in pressure.

4. Pre and postcatacrotic waves

These waves are the segment of catacrotic wave after and before the notch.

Examination of the pulse and its indications:

Examination of pulse is an important clinical procedure. It represents the heartbeat. Important information about cardiac function like rate of contraction, rhythmicity, etc. can be obtained by examining pulse. Besides this a skilled physician is able to understand the mean arterial pressure by the nature of pulse and its amplitude.

Most commonly the pulse is palpated on the radial artery due to its accessibility and placed superficially. Despite of this arterial pulse can be felt in various areas of the body. These areas are known as pulse points, which are:

1. In front of the ear, over the temple on superficial temporal artery- temporal pulse
2. at the angle of jaw, on facial artery - facial pulse
3. On the neck along the anterior border of sternocleidomastiod muscle on common carotid artery-Carotid pulse
4. In axilla on axillary artery- axillary pulse
5. In cubital fossa along medial border of biceps muscle on brachial artery- radial pulse
6. Over the thumb side of wrist between tendons of brachioradialis and flexor carpi radialis muscles on radial artery- Radial pulse
7. Over the little finger side of the wrist on ulnar artery- Ulnar pulse
8. In the groin on femoral artery- Femoral pulse
9. Behind the knee in the popliteal fossa on popliteal artery- popliteal pulse
10. Over the dorsum of the foot on dorsalis pedis artery- Dorsalis pedis pulse
11. Over the back of the ankle behind medial malleolus on posterior tibial artery- Tibialis pulse¹⁵

Pulse is examined by placing the tips of three fingers, index finger, middle finger and ring finger on the artery. While examining the pulse the following features are observed.

1. Rate
2. Rhythm
3. Character
4. Volume
5. Condition of blood vessel wall
6. Delayed pulse

1. Rate

The number of pulse per minute is pulse rate and normal rate is 72 per minute. Pulse rate over 100 per minute is called tachycardia and below 60 per minute Bradycardia.

2. Rhythm

The regularity of pulse is called as rhythm. Under normal conditions, the pulse appears at regular intervals. The rhythm of the pulse becomes irregular in conditions like atrial fibrillation, extrasystole and other types of arrhythmia. The irregular rhythm of pulse is of two types, regularly irregular and irregularly irregular.

3. Character:

The character of the pulse is observed while examining the pulse. It denotes the tension and the waves of the pulse. Normally, it is not possible to detect different waves of the pulse or slight variation in the character or form of the pulse. However, it becomes more prominent in some abnormal conditions like anacrotic pulse, water hammer pulse, pulses paradoxus etc.

4. Volume:

It is the determination of the movement of the vessel wall produced by the transmission of pulse wave. It is also a measure of pulse pressure. It depends upon the condition of the blood vessel.

5. Condition of wall of the blood vessel

It is determined by obstructing the blood flow at brachial artery and rolling the radial artery against the underlying bones. Normally, the wall of the vessel is not palpable in children and young adults. However, in old age the wall of the vessel becomes rigid and palpable. In abnormal conditions like arteriosclerosis it is felt as a hard rope.¹⁵

9. MATERIALS AND METHODS

“Evaluation of naadi perception in the diagnosis of regional pathological conditions” carried out in out patients, Department of Noinaadal of Ayothodoss Pandithar Hospital National Institute of Siddha, Tambaram Sanatorium, Chennai-47

1. STUDY TYPE

- Observational type of study

2. STUDY DESIGN

- A single blind exploratory trial

3. STUDY PLACE

- Out patient department,
Ayothidoss Pandithar Hospital,
National Institute of Siddha(NIS),
Chennai- 47.

4. SAMPLE SIZE

- 500 patients

5. STUDY PERIOD

- 24 months

6. TRIAL REGISTRY

The study was approved by the Institutional Ethics Committee (NIS/13-IEC/2017-1-24/22-11-2017) and was registered in Clinical Trial Registry (CTRI No: CTRI/2018/05/013604)

7. SELECTION CRITERIA

7.1. Inclusion criteria

- Age 15-80 years
- Both male and female

7.2 Exclusion criteria

- Age below 15 years
- Age above 80 years
- Persons wet in rain

- Persons with fractured hands
- Persons under the influence of intoxicants and narcotics

7. METHODOLOGY OF STUDY

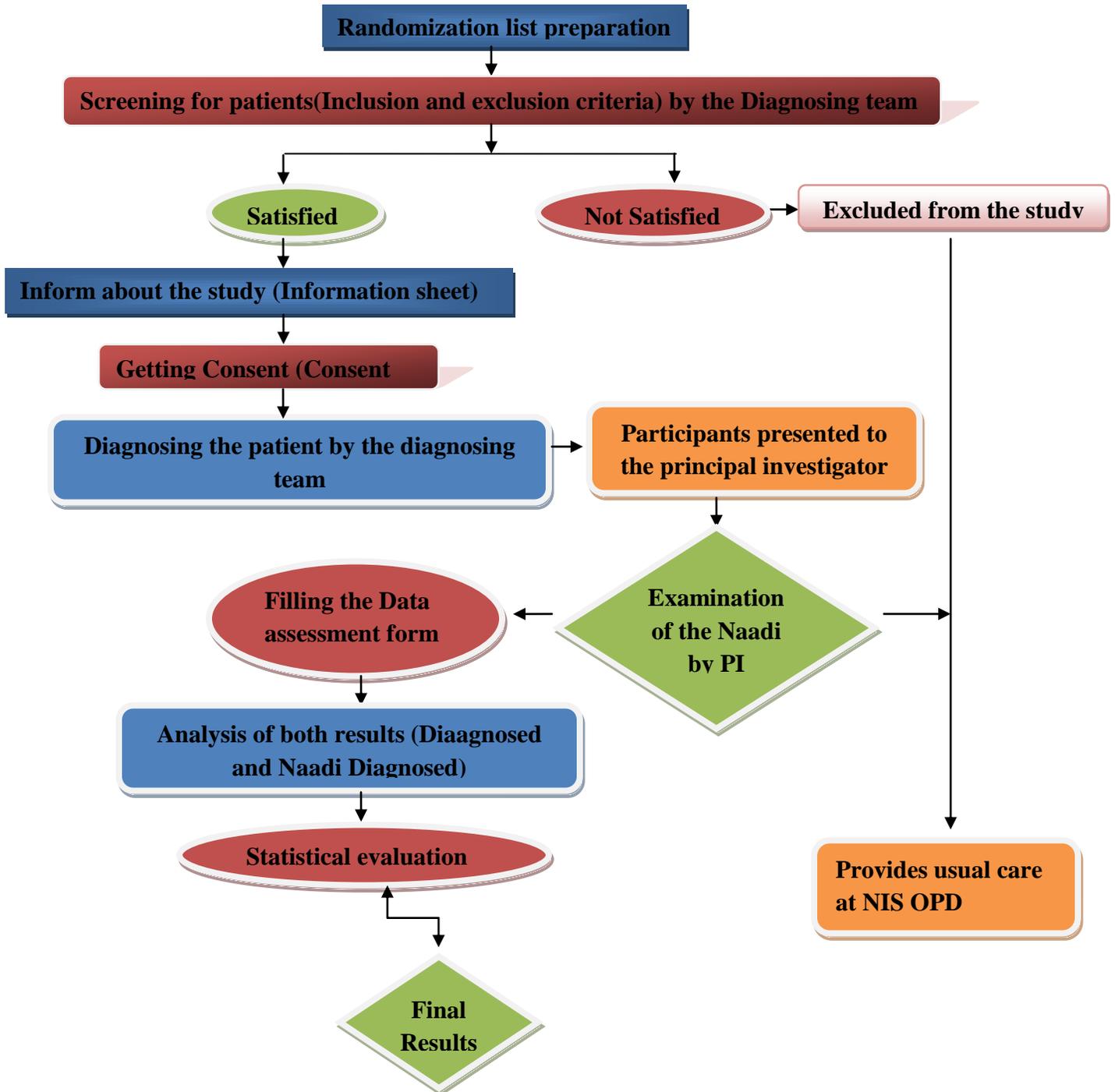


Figure: 9 Methodology of study

The informed consent of the patient was obtained by the trial monitor before the participant would be presented to the Principal Investigator and thus the meeting of the participant with the Principal Investigator prior to the Naadi appraisal was avoided. Patients with different ailments was randomly presented to the principal investigator without revealing the patients' identity, nature of ailments and other details. Patients were subjected for Naadi examination without revealing ailments to find out the affected region. Then the principal investigator went for a thorough checking in order to find out any specific character of Naadi which may provide a clue to the diagnosis of any specific organ pathology. The principal investigator recorded the examined Naadi of the patient and found out the problem and region involved and noted it down on a loose sheet which was handed over to the research team by him immediately after the noting down. The data was processed by the research team which includes the senior research officer, NIS.

9. SOP FOR NAADI READING

The patient should be seated comfortably and his/her hand is caught hold of. Then the finger should be straightened and knuckles cracked. Then the palm should be rubbed as to create mild heat. The elbow of the patient is semi-flexed with the lower end of the fore arm in the mid prone position and the patient's right wrist is held on its lateral aspect about an inch up from the wrist joint by the left hand of the physician holding the wrist between the thumb and the other fingers so that the thumb finger obliterate the blood vessel found at the lower and posterior part of the patient's palm.

The three fingers namely the index finger, middle finger, ring finger of the physician placed on the course of the radial artery and the patient's palm and fingers are being lightly supported with physician's right hand. The three fingers of the physician should be placed in such a manner that there is an inter space of half a centimeter between each finger. The index finger being at the top of first near the wrist joint, the middle finger at the middle and the ring finger at the last. First the finger tips are kept gentle over the course of the radial artery. Then apply little pressure sufficient enough to feel the pulse wave clearly and should not be compressed well to obliterate it.

In Female patient ,Pulse is manipulated in left hand by using physician's right hand and In Male patient,Pulse is manipulated in right hand by using physician's left hand.By thus observing, the practitioner can count the beats, their motion, pressure, nature, and their rousing.

10.STUDY ENROLLMENT

- In the study, patients reporting at the OPD of Ayothidoss Pandithar Siddha Hospital was referred to the Research group. Those patients screened using the screening proforma (Form-I) and examined clinically for enrolling in the study based on the inclusion and exclusion criteria. Based on the inclusion criteria the patients was included first and excluded from the study on the same day if they hit the exclusion criteria.
- The patients who were enrolled would be informed (Form IV-A) about the study, and the objectives of the study in the language and terms understandable for them.
- After ascertaining the patient's willingness, a written informed consent was obtained from them in the consent form (Form IV).
- All these patients was given unique registration card in which patients' Registration number of the study, Address, Phone number and Doctors phone number etc. was given, so as to report to research group easily if any complication arises.
- Complete clinical history, complaints and duration, examination findings all were recorded in the prescribed proforma in the history and clinical assessment forms separately. Screening Form- I was filled up; Form I-A, Form –II and Form –III were used for recording the patient's history, clinical examination of symptoms and signs and lab investigations respectively.

(Vernacular and English versions)

11. DATA COLLECTION FORMS:

- Required information was collected from each patient by using following forms.
Form –I Screening and selection Proforma

Form –IA	History Proforma on enrollment
Form II	Clinical Assessment on enrollment
Form –III	Laboratory investigations on enrollment, during the study
Form –IV	Consent form (Vernacular and English versions)
Form -IV- A	Patient Information Sheet

12. DATA MANAGEMENT

- After enrolling the patient in the study, a separate file for each patient was opened and all forms filed in the file. Study No. And Patient No. entered on the top of file for easy identification and arranged in a separate rack at the concerned OPD unit. Whenever study patient visits OPD during the study period, the respective patient file was taken and necessary recordings made at the case record form or other suitable form.
- The Data recordings was monitored for completion and compliance of patients by HOD and Sr.Research Officer (Statistics). All forms were further scrutinized in presence of Investigators by Sr.Research Officer (Statistics) for logical errors and incompleteness of data before entering onto computer to avoid any bias. No modification in the results is permitted for unbiased report.
- Any missed data found in during the study, it was collected from the patient, but the time related data was not recorded retrospectively
- All collected data were entered using MS access software onto computer.
- Investigator was trained to enter the patient data and cross checked by SRO

13. TREATMENT DURING THE STUDY:

Normal treatment procedure followed in Department of Noi Naadal, NIS were prescribed to the study patients and the treatment provided at free of cost.

14. ETHICAL ISSUES:

- To prevent any infection, while collecting blood sample from the patient, only disposable syringes, disposable gloves, with proper sterilization of lab equipments were used.
- The data collected from the patient were kept confidentially. The patients were informed about the diagnosis.
- After the consent of the patient (through written consent form) they were enrolled in the study.
- Signed informed written consent form got by providing subject information sheet with clearly explained about the advantages and disadvantages of the study.
- Informed consent were obtained from the patient explaining in the understandable language to the patient.
- The protocol were submitted to the IEC for approval and clearance.
- This study involves only the necessary investigations warranted for substantiating the diagnosis and no other investigations (mentioned in the protocol) would be done.
- Normal treatment procedure were followed in NIS prescribed to the study patients and the treatment provided at free of cost.
- There were no infringement on the rights of patient.

15. STATISTICAL ANALYSIS

Statistical analyses were done by using epiinfo 7, a tool used by the researchers for data analysis. The diagnostic performance like sensitivity, specificity, positive predictive value, negative predictive value with respect to the region and diseases were presented as % with 95% c.i. All the probability values were 2 sided and $p < 0.05$ were considered statistically significant. Kappa test was done to analyse the agreement between two diagnostic tool s affected region diagnosed(Afd) and affected region Naadi diagnosed(Afn). To determine the agreement due to chance, compare p value significant level.

NAADI EXAMINATION



Figure: 10



Figure: 11



Figure: 12

10. OBSERVATIONS AND RESULTS

10.1 GENDER DISTRIBUTION:

Table: 5 Gender distribution

Gender	No. of patients	Percentage
Male	245	49%
Female	255	51%
Total	500	100%

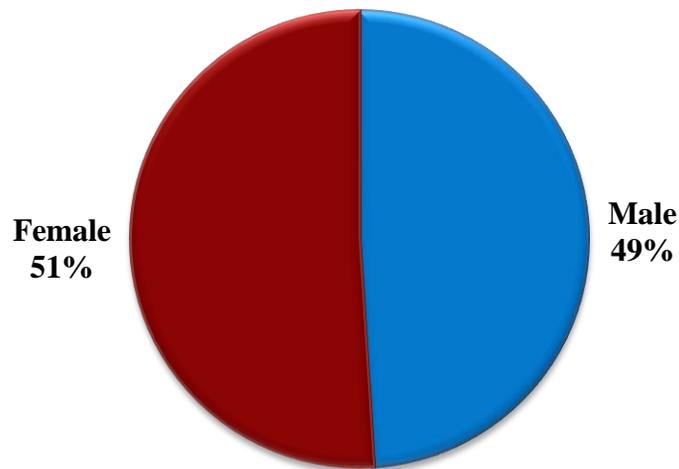


Fig: 13 Gender Distribution

Observation:

Among the total of 500 participants selected for this study 245 patients were male (49%) and 255 patients were female (51%)

10.2 BASELINE CHARACTERISTICS

Table: 6 Baseline Characteristics Of The Study Participants:

Variable	Category	Frequency (n=500)	Percentage
Age	15-30	22	4.40%
	31-40	61	12.20%
	41-50	94	18.80%
	51-60	98	19.60%
	61-85	225	45%
Gender	Male	245	49%
	Female	255	51%
Educational status	Illiterate	104	20.80%
	Literate	325	65.00%
	Student	3	0.60%
	Graduate/post graduate	68	13.60%
Nature of work	Sedentary work	355	71.00%
	Field work with physical labour	107	21.40%
	Field work with Executive	38	7.60%

10.3 AGE AND GENDER DISTRIBUTION:

Table: 7 Age and Gender Distribution

Sl No	Age	Male	Female	Total
1	15-30	17(3.40%)	5(1.00%)	22(4.40%)
2	31-40	31(6.20%)	30(6.00%)	61(12.20%)
3	41-50	35(7.00%)	59(11.80%)	94(18.80%)
4	51-60	31(6.20%)	67(13.40%)	98(19.60%)
5	61-85	131(26.20%)	94(18.80%)	225(45%)

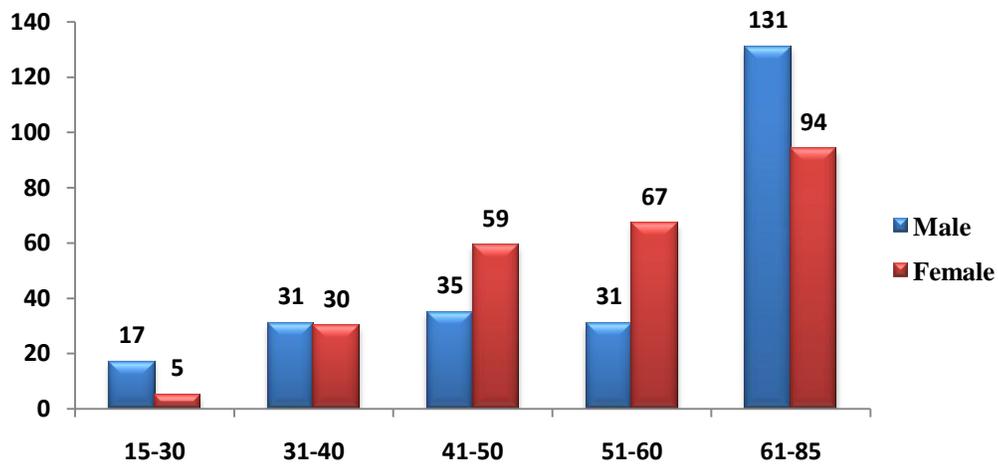


Figure: 14 Age and Gender Distribution

Observation:

Majority of the participants (45%) fell under the age group of 61-85 among these 26.20% were male while 18.80% were female. In the age groups 41- 50 and 51-60 the numbers of participants were almost equal, 18.80% and 19.90% respectively. Second highest number of female participants (13.40%) fell under the age group 51-60. Lowest number of participants (4.40%) fell under the 15-30 age group, and lowest number of male (3.40%) and female (1.00%) participants also fell under the same age group.

In patients below the age 30(Younger adults) and above 60(Geriatric population) ratio of male to female is more, While in the age group 41- 60(Middle aged group) the ratio of female more to male was more. But in the age group of 31-40 the male to female ratio was almost equal.

Minimum age of the participant in this study was 19 and maximum 79.

Median 60.

Mean 55.426

Standard Deviation 12.8335

10. 4 FOOD HABITS:

Table: 8 Food Habits

SI No	Diet	Number of cases	Percentage
1	Vegetarian	108	21.60%
2	Mixed diet	392	78.4%
3	Total	500	100%

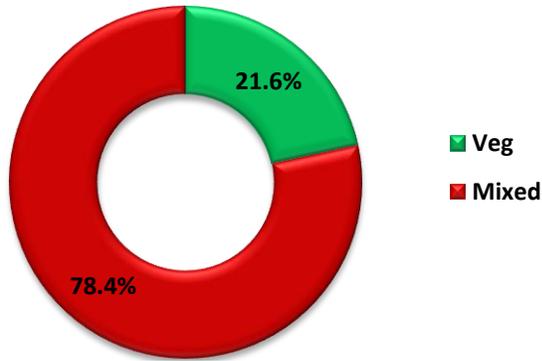


Figure: 15 Food Habits

Observation:

Among the total of 500 patients 108(22%) were vegetarians while 392(78%) were mixed diet.

Inference:

Majority of the respondents (78%) were following mixed type of diet

10. 5 SOCIO ECONOMIC STATUS:

Table: 9 Socio economic status

Sl No	Socio economic status	Number of cases	Percentage
1	Lower class	26	5.20%
2	Middle class	452	90.40%
3	Upper class	22	4.40%
4	Total	500	100%

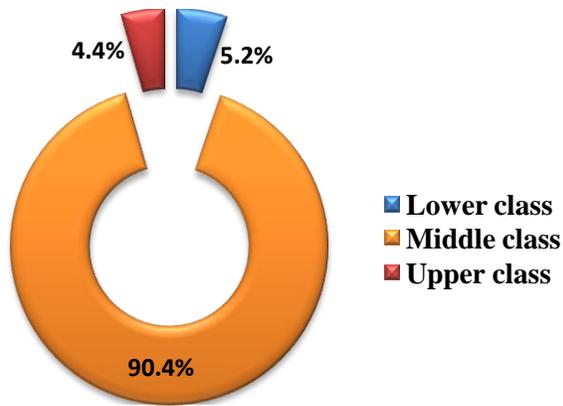


Figure: 16 Socio economic status

Observation:

Majority of the participants 90.40% were fell under middle economic class followed by lower class (5.20%) and Upper class (4.40%).

10.6 EDUCATIONAL STATUS:

Table: 10 Educational status

Sl No	Educational status	Frequency(n=500)
1	Illiterate	104(20.80%)
2	Literate	325(65%)
3	Student	3(0.60%)
4	Graduate/post graduate	68(13.60%)

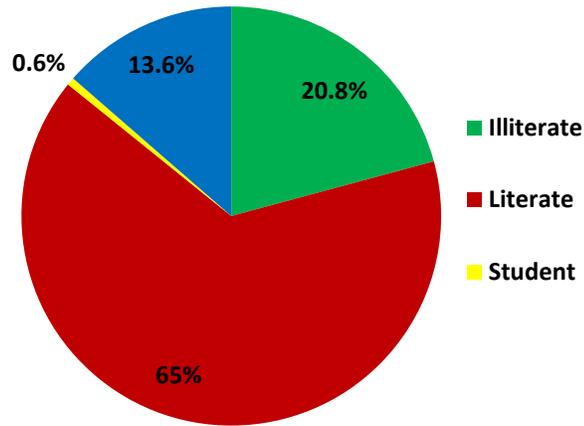


Figure: 17 Educational status

Observation:

Majority of the participants (65%) were literate followed by Illiterate (21%), Graduate/post graduate (13%) and students (1%).

10.7 NATURE OF WORK:

Table: 11 Nature of work

Nature of work	Frequency	Percentage
Sedentary work	355	71.00%
Field work with physical labour	107	21.40%
Field work with Executive	38	7.60%

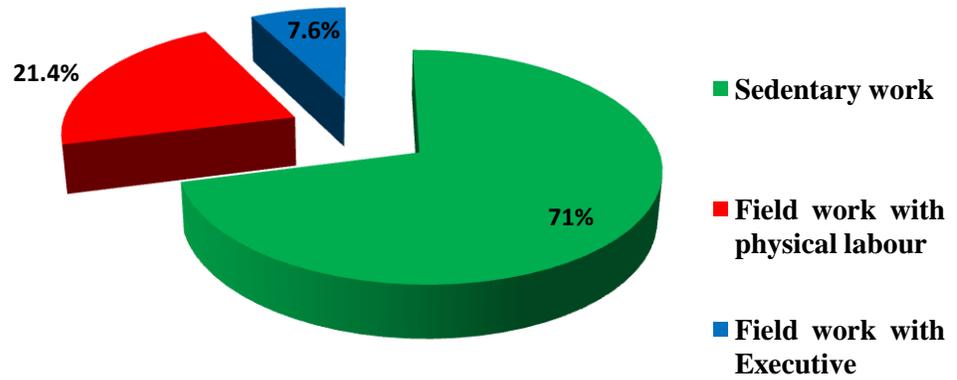


Figure: 18 Nature of work

Observation

Majority of the participants (71%) were doing sedentary work followed by Field work with physical labour (21%) and Field work with Executive (8%).

10.8 MARITAL STATUS:

Table: 12 Marital status

Marital status	Frequencies	Percentage
Married	478	95.60%
unmarried	22	4.40%

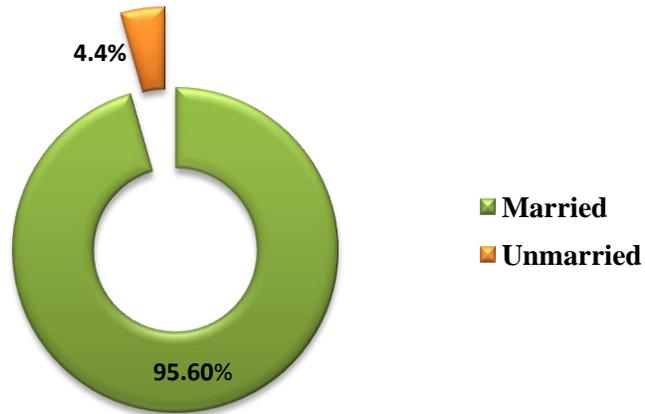


Figure: 19 Marital status

Observation

Majoroty of the participants (65.60%) were married while 4.40% were unmarried.

10.9 STATUS OF MENSTRUATION:

Table: 13 Status of Menstruation:

SI No	Menstrual history	Frequency	Percentage
1	Hysterectomy	31	12%
2	Irregular	16	3%
3	Regular	67	26%
4	Menopause	141	56%

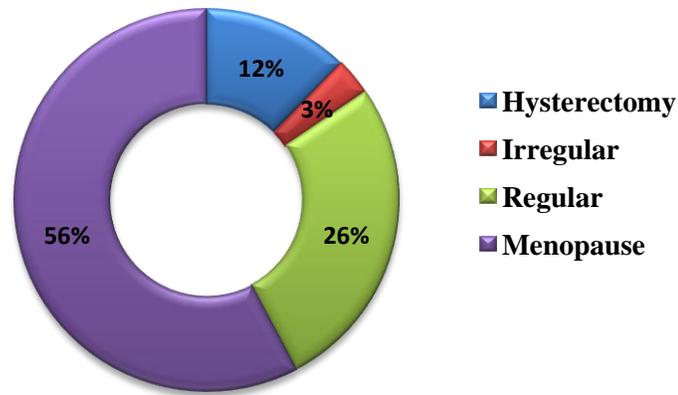


Figure: 20 Status of menstruation

Observation:

Majority of the female participants (56%) in this study attained menopause, followed by regular menstruation (26%), irregular menstruation (3%). 12% of the female participants underwent Hysterectomy

10.10 NAADI READING SEASON:

Table: 14 Naadi reading season

Sl no	Season	Number of cases	Percentage
1	Munpani kaalam	177	35.4%
2	Pinpanikaalam	269	53.8%
3	Ilavenirkaalam	54	10.8%
4	Total	500	100%

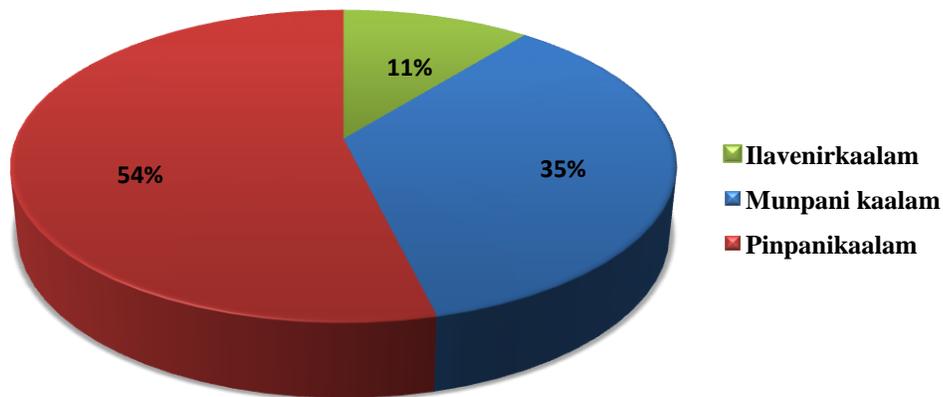


Figure: 21 Naadi reading season

Observation:

Out of 500 cases, Naadi examined in 177(35.4%) cases during *Munpani kaalam*, in 269(53.8%) cases during *Pinpani kaalam* and in 54(10.80%) cases during *Ilavenir kaalam*.

Inference:

Most of the cases were examined during *Pinpani kaalam* and *Munpani kaalam*

10.11 NATURE OF NAADI:

Table: 15 Nature of Naadi

Sl No	Nature of Naadi	Number of cases	Percentage
1	Azhuthal(Ducking)	2	0.4%
2	Illaithal(Feeble)	115	23.00%
3	Kalathal(Blending)	116	23.2%
4	Kathithal(swelling)	1	0.2%
5	Kuthithal(Jumping)	4	0.8%
6	Munnokku(Advancing)	32	6.4%
7	Paduthal(Lying)	1	0.2%
8	Pakkam nokku(swerving)	2	0.4%
9	Pinnokku(Flinching)	1	0.2%
10	Suzhalal(Revolving)	18	3.6%
11	Thannadai(playing in)	193	38.6%
12	Thullal(Frisking)	15	3%
13	Total	500	100%

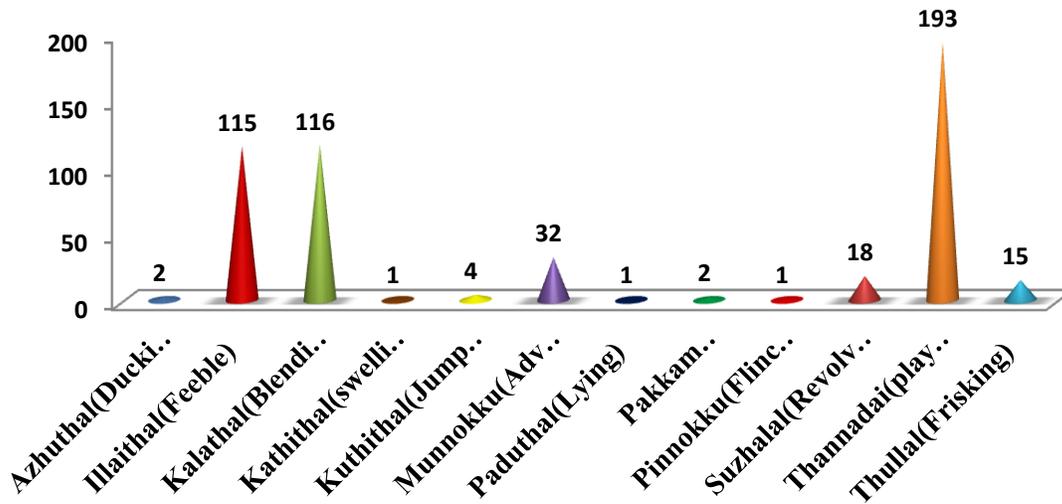


Figure: 22 Nature of Naadi

Observation:

In majority of the participants (38.60%) nature of Naadi were observed as Thannadai, while 23.20% and 23.00% had the nature of Naadi as Kalthal and Illaithal respectively. In 6.40% participants the nature of Naadi was Munnokku, 3.60% it was revolving (Suzhalal) and in 3.00% as Thullal. Minimum number of patients had the other nature of naadi like Azhuthal, Kathithal, Kuthithal, Paduthal, Pakkam nokku, Pinnokku etc.

Inference:

Feeble pulsation was seen in obese participants which was very difficult to perceive and differentiate.

10.12 NAADI NADAI:

Table: 16 Naadi Nadai

Naadi	Number of cases	Percentage
VP	149	29.8%
VK	55	11%
PV	257	51.4%
PK	21	4.2%
KV	12	2.4%
KP	6	1.2%
Total	500	100%

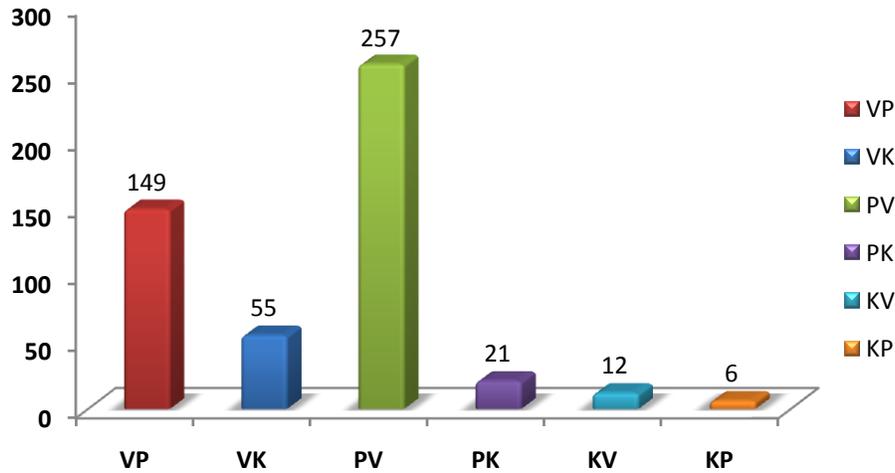


Figure: 23 Naadi Nadai

Observation:

Majority of the participants (51.40%) had Pitha Vatha Naadi followed by Vatha Pitha Naadi (29.80%). It was the Kaba Pitha Naadi which had seen in lowest number of participants (1.20%).

Inference:

Predominant Naadi will be either Vatha or Pitha in maximum number of persons since Kaba Naadi is feeble compared to the other two.

Table: 17 Comparison of the Naadi nadai and Region:

Region		Naadi nadai	
Vatha	456	Vatham 1	192
		Vatham 2	250
Pitha	274	Pitham 1	171
		Pitham 2	76
Kabham	68	Kabham 1	7
		kabham 2	22

Observation:

In participants affected Vatha and Pitha region had their Naadi nadai as the corresponding Humour either as primary or as secondary. But Kaba region affected patients had less similarity with their corresponding naadi comparing to the other two.

Inference:

Less similarity in Kaba Naadi and Kaba region may be due to the feeble nature of the Kaba Naadi

10.13 DHEGHI STATUS:**Table: 18 Dheghi status**

Dheghi status	Number of cases	Percentage
VP	34	6.8%
VK	18	3.6%
PV	271	54.2%
PK	57	11.4%
KV	69	13.8%
KP	49	9.8%
Total	498	99.6% %

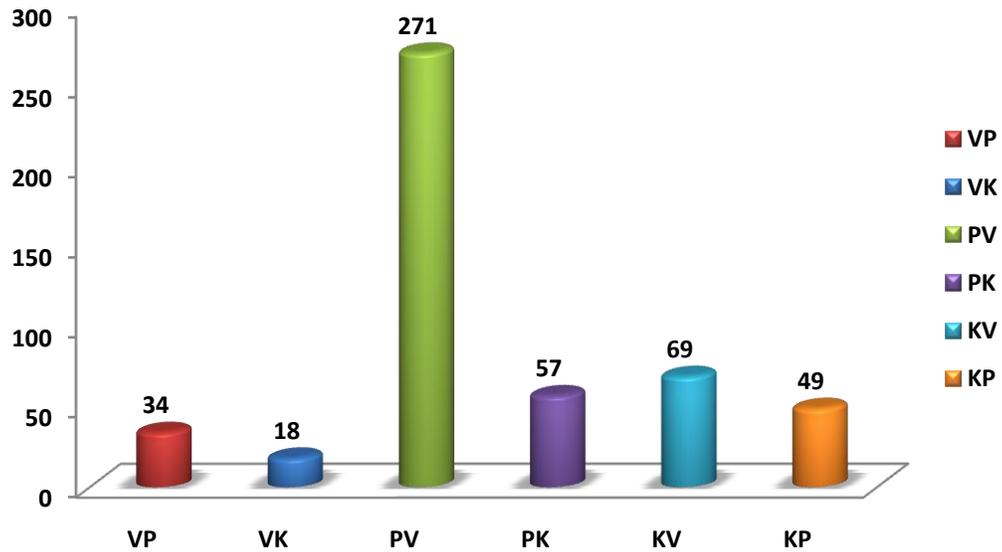


Figure: 24 Dheghi status

Observation:

Out of 500 patients Primary Investigator couldn't interpret Dheghi status in 2 patients. Maximum number of participants (54.20%) had the Dheghi as Pitha Vatham followed by 6.80% Vatha Pitham, 13.60% as Vatha Kabam, 11.40% as Pitha Kabam, 13.80% as Kaba Vatham and 9.80% as Kaba Pitham.

Inference:

The predominant Dheghi found in this study was Pitha Vatham.

10.14 COMPARISON OF NAADI NADAI AND DHEGHI STATUS:

Table: 19 Comparison of Naadi Nadai and Dheghi status

SI No	Dheghi	Humour	Naadi Nadai
1	34(6.80%)	VP	149(29.80%)
2	18(3.60%)	VK	55(11.00%)
3	271(54.20%)	PV	257(51.40%)
4	57(11.40%)	PK	21(4.20%)
5	69(13.80%)	KV	12(2.40%)
6	49(9.80%)	KP	6(1.20%)
7	498	Total	500

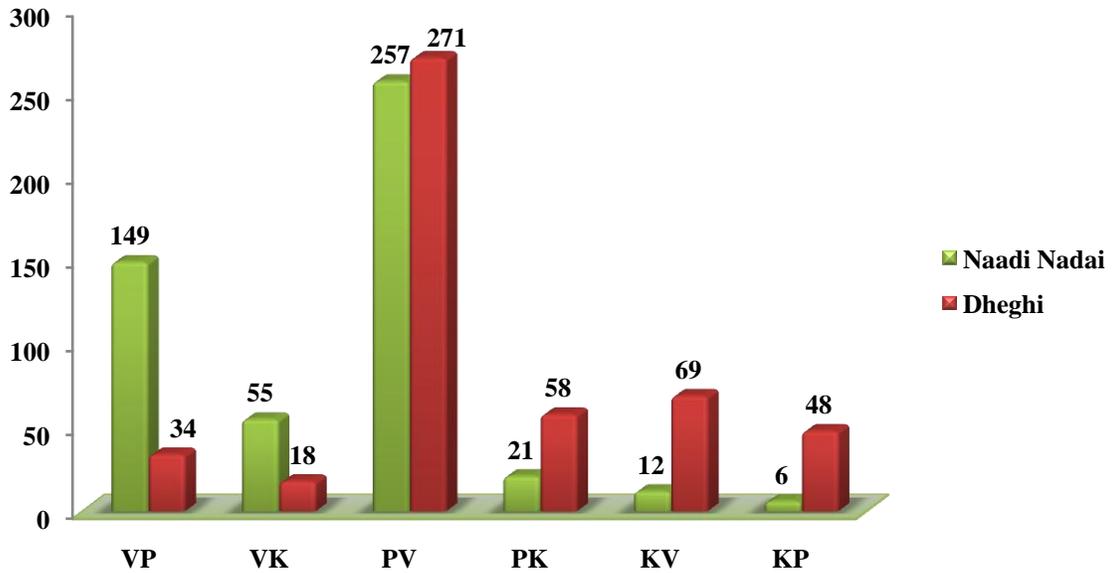


Figure:25 Comparison of Naadi Nadai and Dheghi status

Observation:

Majority of the participants had Naadi nadai (51.40%) and Dheghi (54.20%) as Pitha Vatham. But there was a significant difference in between Naadi Nadai and Dheghi in all other participants. Highest difference was in participants (29.80%) who had Naadi as Vatha Pitham since 6.80% participants only had Vatha Pitha Dheghi.

10.15 AFFECTED REGION (ALREADY DIAGNOSED) AND GENDER

DISTRIBUTION:

Table:20 Gender Distribution of already diagnosed participants affected with different regions

Region	Male	Female	Total
V	85(17%)	107(21.4%)	192(38.40%)
P	17(3.4%)	9(1.8%)	26(5.20%)
K	4(0.8%)	2(0.4%)	6(1.20%)
V & P	108(21.6%)	106(21.2%)	214(42.80%)
V & K	14(2.8%)	16(3.2%)	30(6%)
P & K	10(2%)	2(0.4%)	12(2.40%)
V & P & K	7(1.4%)	13(2.6%)	20(4%)
Total	245	255	500

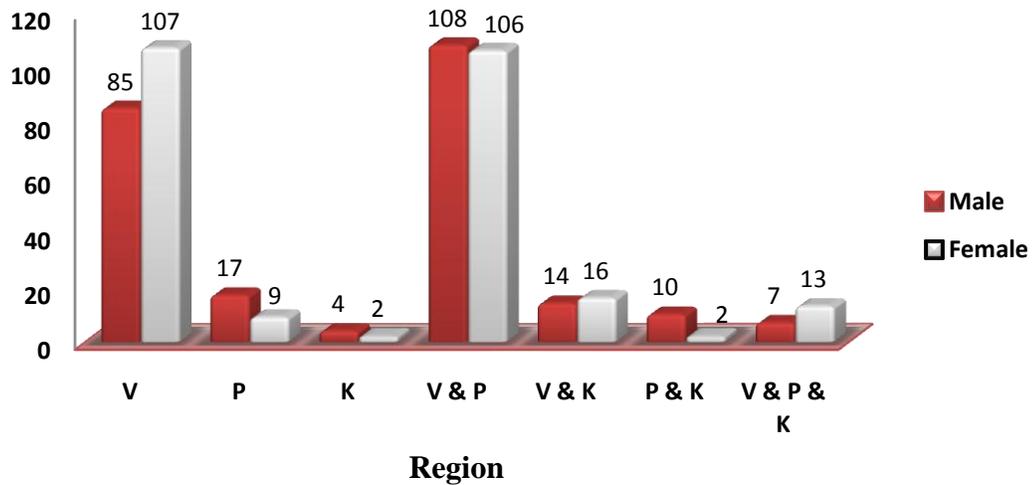


Figure: 26 Gender Distribution of already diagnosed participants affected with different regions

Observation:

While diagnosing the affected region in participants of this study more participants had problem either in Vatha region alone or in both Vatha and Pitha region. Majority of the Participants (42.80%) were affected with diseases both in vatha and Pitha region, among these 21.6% were male and 21.2% were female. Among the participants (38.4%) who had affected with diseases only in Vatha region, 17% were male and 21.4% were female. Lowest number of participants (1.20%) had problem only in Kaba region among them 0.8% were male and 0.4 were female. Coming to the other region 6% were affected with Vatha and Kaba region followed by 5.20% with Pitha region, 2.40% with both Pitha and Kaba, 4% with both Vatha, Pitha and Kaba region.

Inference:

Maximum number of diagnosed cases had problem either in Vatha region or Both Vatha and Pitha region while minimum number of cases had problem in Kaba region.

Table: 21 Age Distribution of already diagnosed participants affected with different regions

Age	Region							Total
	V	P	K	V & P	V & K	P & K	V & P & K	
Below 30	6	3	2	2	3	5	1	22
31-40	33	7	1	12	4	0	4	61
41-50	45	4	0	33	9	1	2	94
51-60	41	2	0	43	7	1	4	98
Above 60	67	10	3	124	7	5	9	225

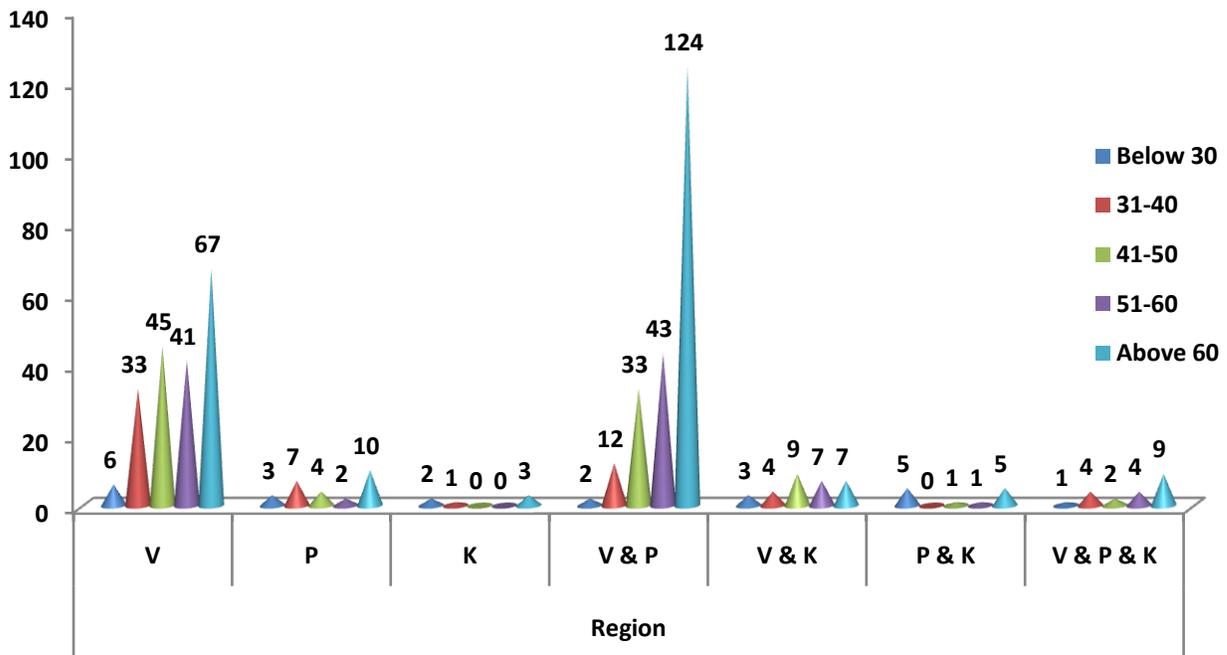


Figure: 27 Age Distribution of already diagnosed participants affected with different regions

Observation:

While diagnosing the affected region in participants of this study more participants were had problem either in Vatha region alone or in both Vatha and Pitha region. Among the Participants who affected with diseases both in vatha and Pitha region, maximum numbers fell in the age group of 61-85(Geriatric participants) and minimum number fell under the age group 15-30(Young population). Among participants who had affected with diseases only in Vatha region,

maximum number fell under the age group 61-85 and minimum number in 15-30 age groups. Maximum number of participants in middle aged group also had diseases in either Vatha region alone or in both Vatha and Pitha region. Remaining participants who had problem in other regions fell under different age groups were distributed almost equally.

Inference:

As per this study maximum number of participants had diseases either in Vatha region alone or both in Vatha and Pitha region.

10.16 AFFECTED REGION (NAADI DIAGNOSED) AND GENDER DISTRIBUTION:

Table:22 Gender Distribution of Naadi diagnosed participants affected with different regions

Region	Male	Female	Total
V	76(15.2%%)	101(20.2%)	177(35.68%)
P	5(1%)	8(1.6%%)	13(2.62%)
K	4(0.8%)	0(0.00%)	4(0.8%)
V & P	123(24.6%%)	112(22.4%%)	235(47.98%)
V & K	14(2.8%%)	17(3.4%)	31(6.2%)
P & K	5(1%)	3(0.6%)	8(1.6%)
V & P & K	15(3%)	13(2.6%)	28(5.6%)
Total	242	254	496

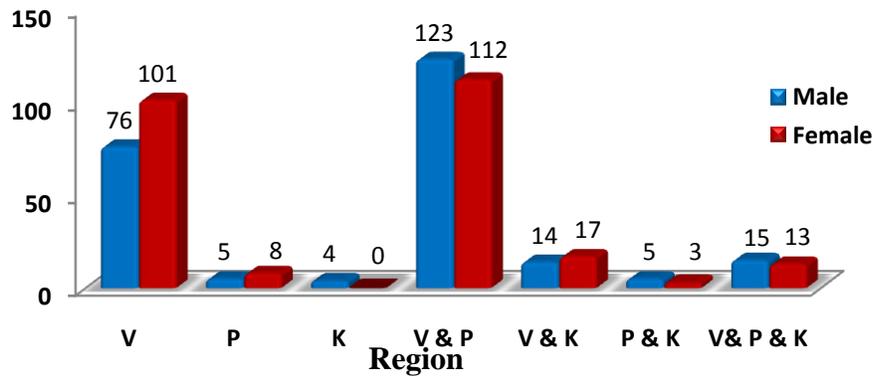


Figure: 28 Gender Distribution of Naadi diagnosed participants affected with different regions

Observation:

While diagnosing the affected region with Naadi in participants of this study more participants had problem either in Vatha region alone or in both Vatha and Pitha region like that of already diagnosed. Majority of the Participants (47.98%) were affected with diseases both in vatha and Pitha region, among these 24.6% were male and 22.4% were female. Among the participants (35.68%) who had affected with diseases only in Vatha region, 15.2% were male and 20.2% were female. Lowest number of participants (0.8%) had problem only in Kaba region among them 0.8% were male and 0% were female. Coming to the other regions 1% 6.2% were affected with Vatha and Kaba region followed by 2.62% with Pitha region, 1.60% with both Pitha and Kaba, 5.60% with both Vatha, Pitha and Kaba region.

Inference:

As per this study maximum number of cases had problem either in Vatha region or Both Vatha and Pitha region while minimum number of cases had problem in Kaba region like the results in already diagnosed cases.

Figure: 23 Age Distribution of Naadi diagnosed participants affected with different regions

Age	Region							Total
	V	P	K	V & P	V & K	P & K	V & P & K	
Below 30	5	2	1	3	2	5	4	22
31-40	25	2	1	22	5	1	4	60
41-50	47	1	0	34	7	0	5	94
51-60	36	1	0	47	8	0	5	97
Above 60	64	7	2	129	9	2	10	223

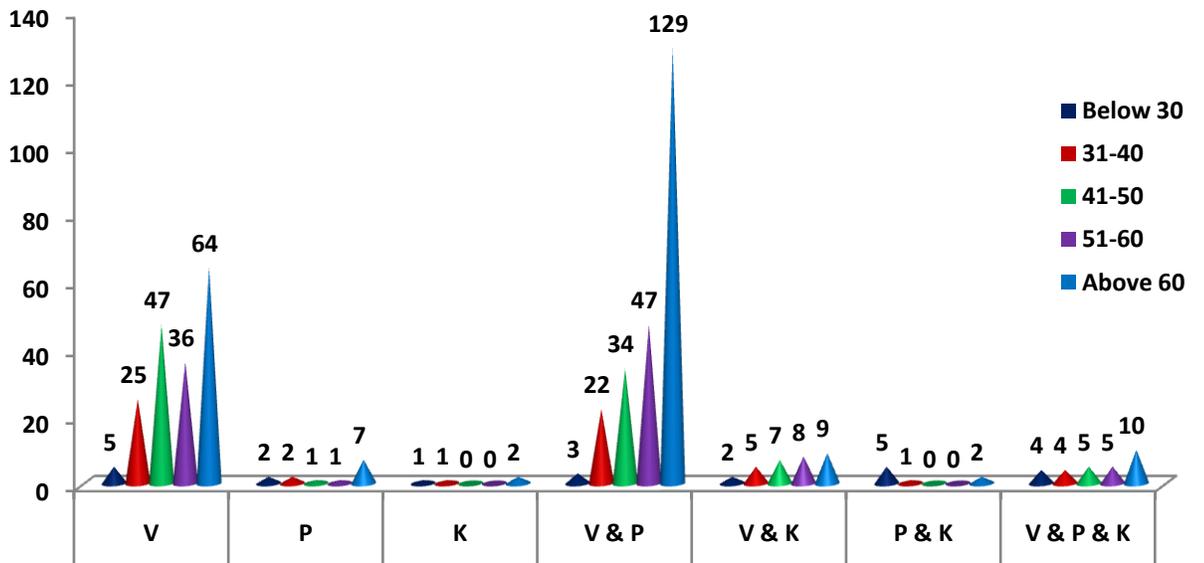


Figure: 29 Age Distribution of Naadi diagnosed participants affected with different regions

Observation:

While diagnosing the affected region in participants of this study through Naadi examination more participants had problem either in Vatha region alone or in both Vatha and Pitha region like already diagnosed by the team. Among the Participants who affected with diseases both in vatha and Pitha region, maximum numbers fell in the age group of 61-

85(Geriatric participants) and minimum number fell under the age group 15-30(Young population).

Among participants who had affected with diseases only in Vatha region, maximum number fell under the age group 61-85 and minimum number in 15-30 age groups. Maximum number of participants in middle aged group also had diseases in either Vatha region alone or in both Vatha and Pitha region. Remaining participants who had problem in other regions fell under different age groups were distributed almost equally like already diagnosed by the team.

Inference:

Naadi diagnosis also suggests that maximum number of participants had problem either in Vatha region or Both Vatha and Pitha region while minimum number of participants had problem in Kaba region like the results in already diagnosed cases.

Table: 24 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Vatha Region

Age	Vatha region	
	No of patients	
	Diagnosed	Naadi Diagnosed
15-30	6(1.2%)	5(1%)
31-40	33(6.6%)	25(5.04%)
41-50	45(9%)	47(9.4%)
51-60	41(8.2%)	36(7.25%)
61-85	67(13.4%)	64(12.90%)
Total	192(38.4%)	177(35.68%)

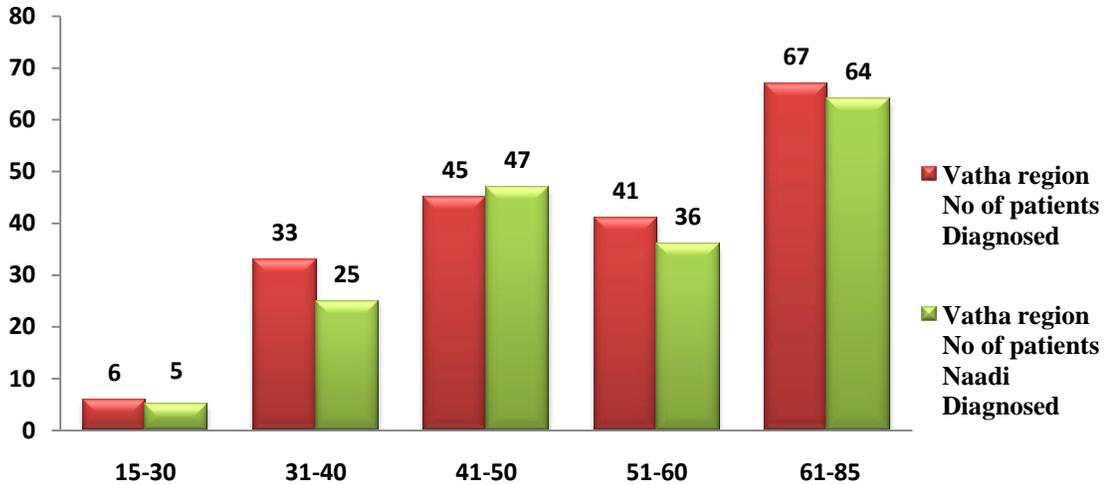


Figure: 30 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Vatha Region

Observation:

The participants affected with Vatha region were seems to be almost equal in all age groups except 31- 40 and 51- 60. More number of participants affected with vatha region fell in the age group 61-85 years while less number affected fell in 15-30 age group.

Table: 25 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Pitha Region

Age	Pitha region	
	No of patients	
	Diagnosed	Naadi Diagnosed
15-30	3(0.6%)	2(0.4%)
31-40	7(1.40%)	2(0.4%)
41-50	4(0.80%)	1(0.2%)
51-60	2(0.4%)	1(0.2%)
61-85	10(2%)	7(1.41%)
Total	26(5.20%)	13(2.62%)

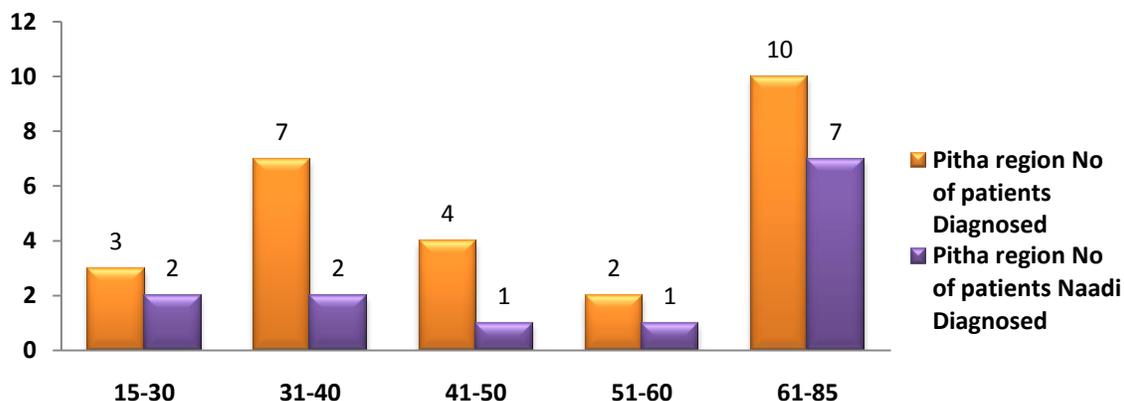


Figure: 31 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Pitha Region

Observation:

Numbers of affected Pitha region were more in all the age groups of already diagnosed participants compared to Naadi diagnosis. More number of participants fell under the age group 61-85 .

Table: 26 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Kaba Region

Age	Kaba region	
	No of patients	
	Diagnosed	Naadi Diagnosed
15-30	2(0.40%)	1(0.20%)
31-40	1(0.20%)	1(0.20%)
41-50	0(0.00%)	0(0.00%)
51-60	0(0.00%)	0(0.00%)
61-85	3(0.60%)	2(0.40%)
Total	6(1.20%)	4(0.80%)

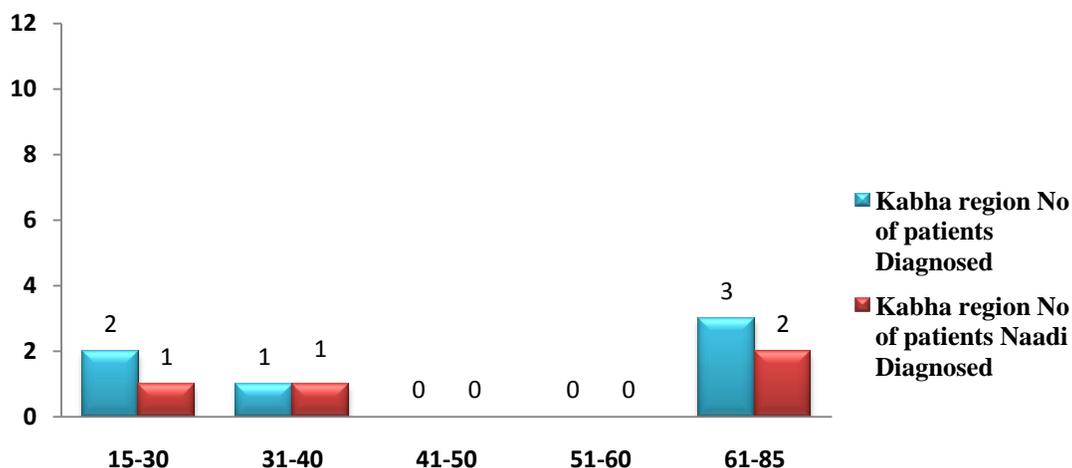


Figure: 32 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Kaba Region

Observation:

Already Diagnosed and Naadi diagnosed participants affected with exclusively Kaba region were almost same in all the age groups and it is very few compared to other regions.

Table: 27 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Vatha and Pitha Region

Age	Vatha & Pitha region	
	No of patients	
	Diagnosed	Naadi Diagnosed
15- 30	2(0.40%)	3(0.60%)
31-40	12(2.40%)	22(4.44%)
41-50	33(6.60%)	34(6.80%)
51-60	43(8.60%)	47(9.48%)
61-85	124(24.80%)	129(26.00%)
Total	214(42.8%)	235(47.38%)

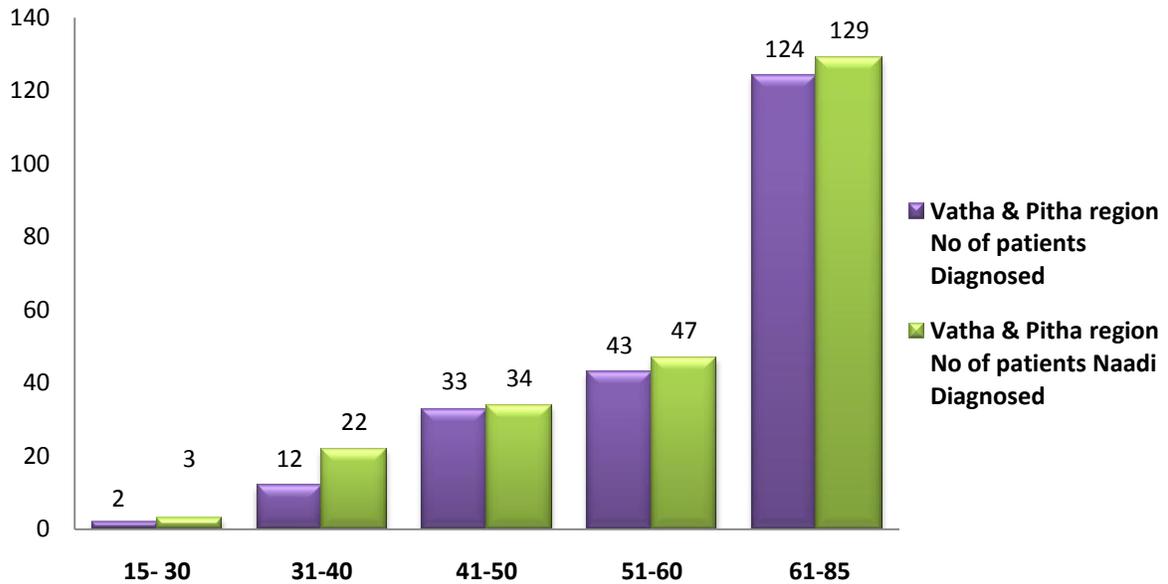


Figure: 33 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Vatha and Pitha Region

Observation:

Already Diagnosed and Naadi diagnosed participants affected with Vatha and Pitha Region were fewer in younger age group(15-30) while more in geriatric age group(61-85). In the middle age group it was mediocre. The number of participants affecting both Vatha and Pitha region increases in an ascending manner from younger to geriatric age group.

Table: 28 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Vatha and Kaba Region

Sl No	Age	Vatha & Kaba region	
		No of patients	
		Diagnosed	Naadi
1	15-30	3(0.60%)	2(0.40%)
2	31-40	4(0.80%)	5(1.00%)
3	41-50	9(1.80%)	7(1.41%)
4	51-60	7(1.40%)	8(1.61%)
5	61-85	7(1.40%)	9(1.81%)
6	Total	30(6.00%)	31(6.25%)

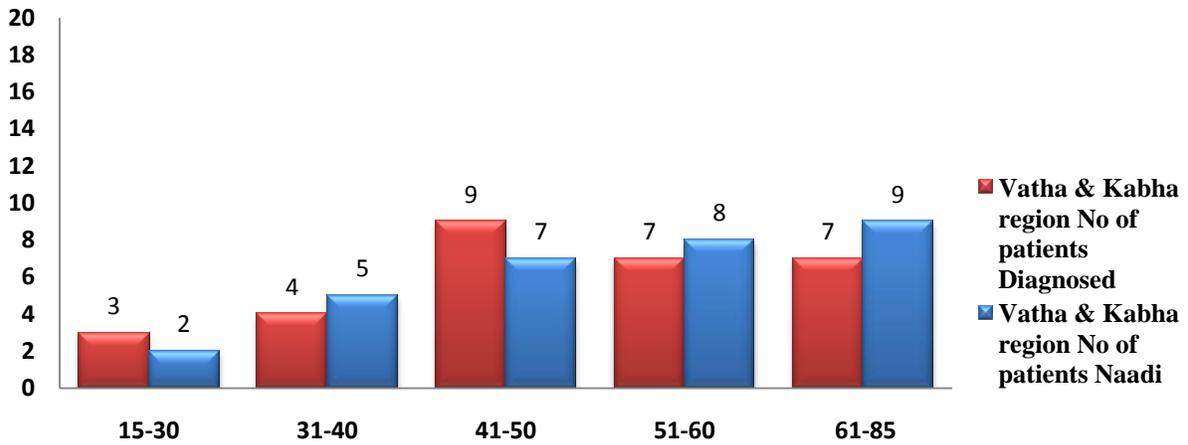


Figure: 34 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Vatha and Kaba Region

Observation:

Already Diagnosed and Naadi diagnosed participants affected with Vatha and Kaba region were almost same in all the age groups .Comparing to the all other age groups fewer participants were fell under the age group 15-30 (younger group).

Table: 29 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Pitha and Kaba Region

Sl No	Age	Pitha &Kaba region	
		No of patients	
		Diagnosed	Naadi
1	15-30	5(1.00%)	5(1.00%)
2	31-40	0(0.00%)	1(0.20%)
3	41-50	1(0.20%)	0(0.00%)
4	51-60	1(0.20%)	0(0.00%)
5	61-85	5(1.00%)	2(0.40%)
6	Total	12(2.40%)	8(1.61%)

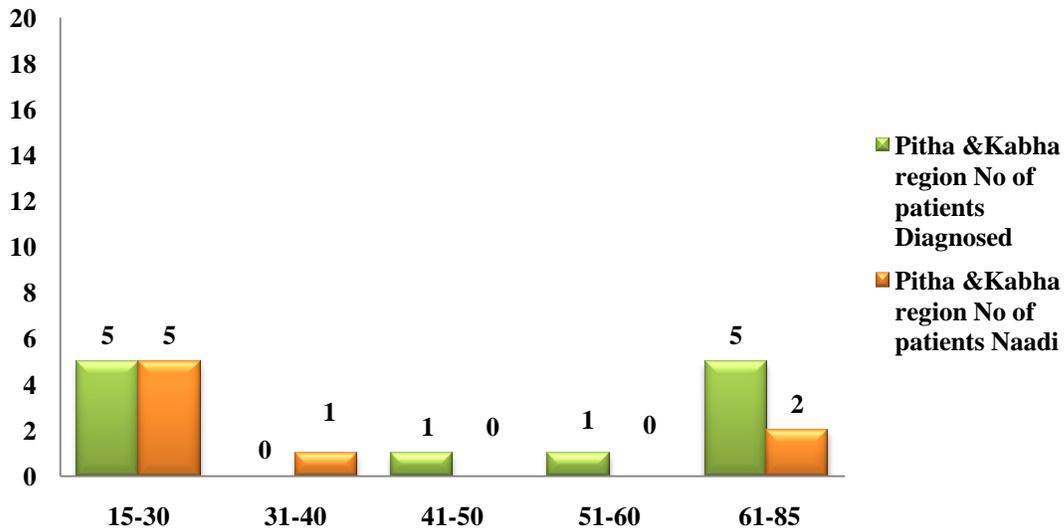


Figure: 35 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Pitha and Kaba Region

Observation:

Already Diagnosed and Naadi diagnosed participants affected with Pitha and Kaba region were equal in the age group 15-30. As per this study the participants affected with both Pitha and Kaba region was fewer in the middle age group.

Table: 30 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Vatha, Pitha and Kaba Region

SI No	Age	Vatha & Pitha & Kaba region	
		No of patients	
		Diagnosed	Naadi Diagnosed
1	15- 30	1(0.20%)	4(0.80)%
2	31-40	4(0.80%)	4(0.80%)
3	41-50	2(0.40%)	5(1.00%)
4	51-60	4(0.80%)	5(1.00%)
5	61-85	9(1.80%)	10(2.01%)
6	Total	20(4.00%)	28(5.64%)

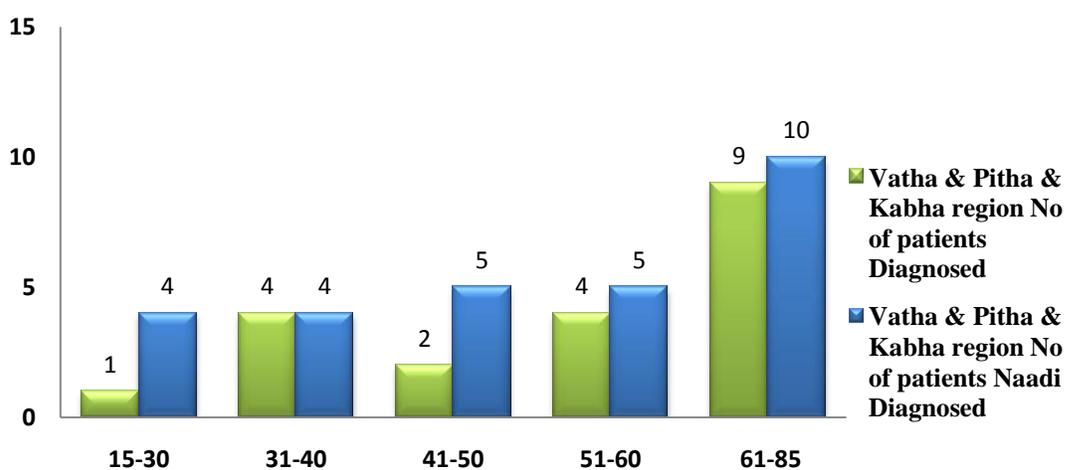


Figure: 36 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Vatha, Pitha and Kaba Region

Observation:

Diagnosed and Naadi diagnosed participants affected with Vatha, Pitha and Kaba region seems to be almost equal in all age groups except in 15-30 age groups and 41-50 age groups. Only 4% participants out of 500 were affected with all the three regions while it was 5.64% according to the Naadi diagnosis.

Tabl: 31 Gender distribution of Already Diagnosed and Naadi diagnosed participants affected Regions

Region	Affected reion Diagnosed(Afd)		Affected region Naadi diagnosed (Afn)		Affected reion Diagnosed (Afd) vs Affected region Naadi diagnosed (Afn)		
	Male	Female	Male	Female	Male	Female	Total
V	85	107	76	101	210(42%)	239(47.8%)	449(89.8%)
P	17	9	5	8	132(26.4%)	111(22.2%)	243(48.6%)
K	4	2	4	0	29(5.8%)	22(4.4%)	51(10.2%)
V & P	108	106	123	112	107(21.4%)	99(19.8%)	206(41.2%)
V & K	14	16	14	17	15(3%)	18(3.6%)	33(6.6%)
P & K	10	2	5	3	122.4%)	8(1.6%)	20(4%)
V& P & K	7	13	15	13	4(0.8%)	6(1.2%)	10(2%)
	245	255	242	254			

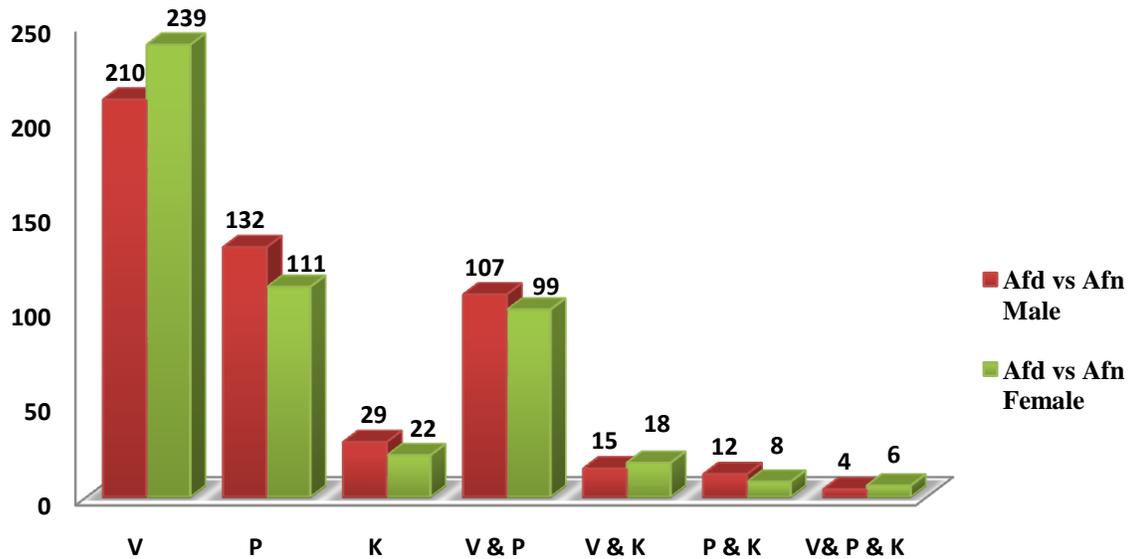


Figure: 37 Gender distribution of Already Diagnosed and Naadi diagnosed participants affected with Region

Observation:

As per both Diagnosing team and Naadi diagnosis 449(89.80%) participants had problem in Vatha region, 243(48.60%) had problem in Pitha region and 51(10.20%) had problem in Kaba region. Among these 206(41.20%) had problem in both Vatha and Pitha region while 33(6.60%) had problem in Vatha and Kaba region. 20(4.00%) had problem in Pitha and kaba region while 10(2.00%) had problem in Vatha, Pitha and Kaba region.

10.17 COMPARISON OF AFFECTED REGIONS:

Table: 32 Comparison of Affected regions (Diagnosed and Diagnosed by the Naadi):

Region	Affectesd rgiion Diagnosed(Afd)	Affected region Naadi Diagnosed(Afn)	Affected region (Diagnosed vs Naadi diagnosed)
Vatha	456	471	449
Pitha	272	284	243
Kaba	68	71	51

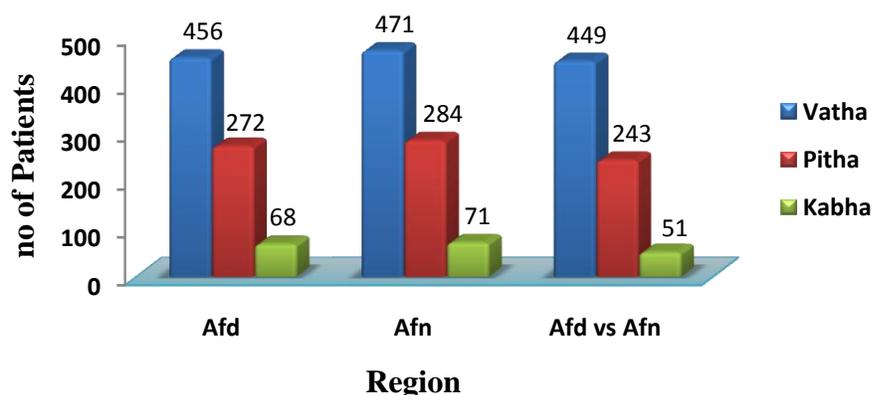


Figure: 38 Comparison of Already Diagnosed and Naadi Diagnosed Regions

Observation:

449 participants were equally diagnosed as Vatha region affected by both Diagnosing team and Naadi while 243 participants were affected as Pitha region affected and 51 were as Kaba region affected. 15 participants were diagnosed as affected with vatha region, 12 as affected with Pitha region and 3 as affected with Kaba region by Naadi in excess.

Inference:

Excess diagnosis in Naadi may be considered as either misdiagnosis by the diagnosing team or Primary investigator. As a disease can be picked up by Naadi diagnosis earlier than its external manifestations, these diagnoses in excess by Naadi may be a pointing towards the diseases which the participants may occur in future.

Table: 33 Percentage of inter rater agreement (*k*) Between Already Diagnosed and Naadi Diagnosed Regions

Region	Percentage of inter rater agreement(Cohens kappa- <i>k</i>)
Vatha	0.701
Pitha	0.836
Kaba	0.814

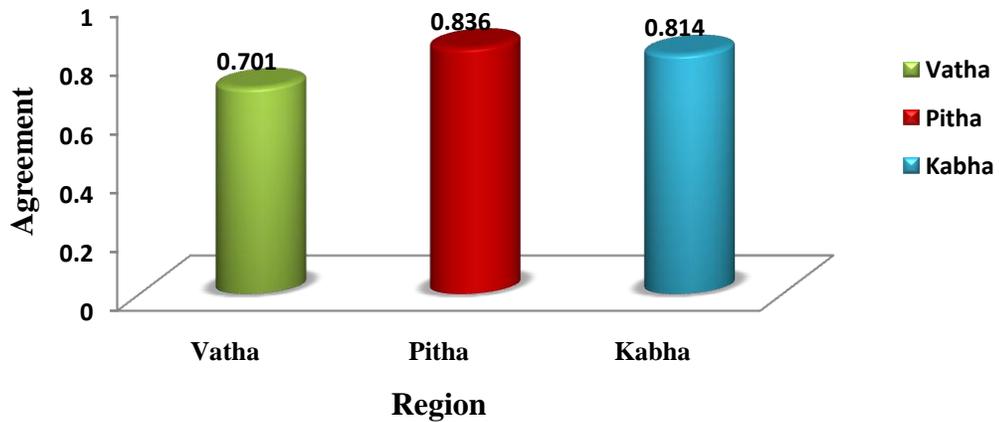


Figure: 39 Percentage of inter rater agreement (*k*) Between Already Diagnosed and Naadi Diagnosed Regions

Table: 34 Sensitivity, specificity, positive predictive value and negative predictive value Between Already Diagnosed and Naadi Diagnosed Regions

Region	Sensitivity	Specificity	positive predictive value	negative predictive value
Vatha	98.46%	65.91%	96.77%	80.56%
Pitha	89.34%	94.74%	95.29%	88.16%
Kaba	75%	99.31%	99.44%	96.19%

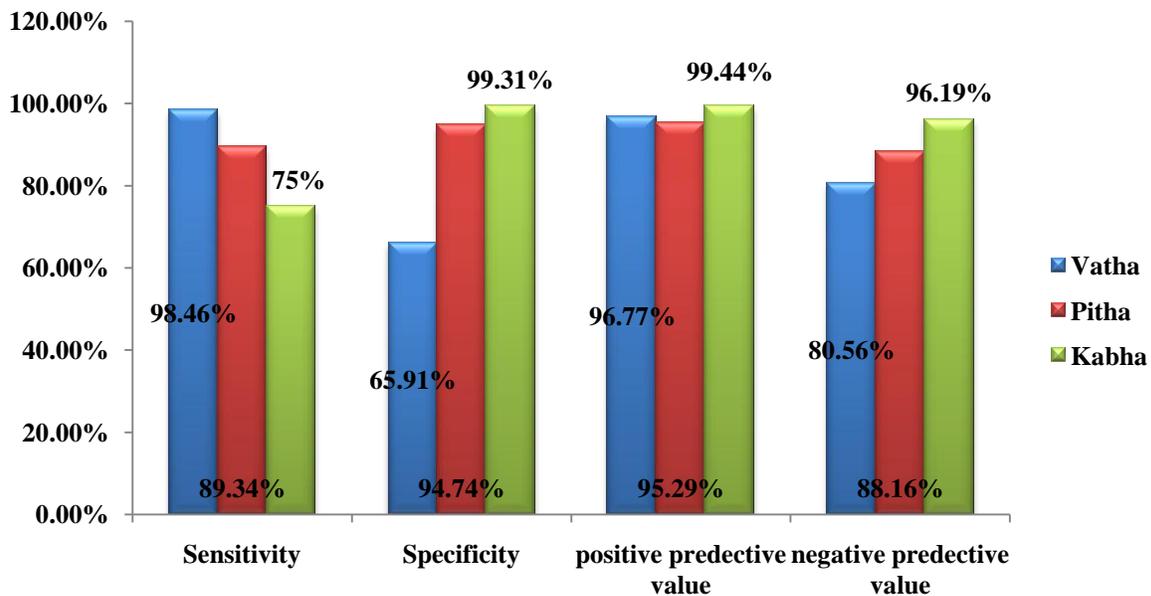


Figure: 40 Sensitivity, specificity, positive predictive value and negative predictive value Between Already Diagnosed and Naadi Diagnosed Regions

Real time accuracy of Naadi is significantly highest in diagnosing the diseases in Vatha region. In this study, sensitivity in detecting diseases in Vatha region is higher when compared to Pitha and Kaba region. Specificity was higher in Kaba region followed by Pitha. An ideal test has both high sensitivity and specificity. So it is ideal in detecting diseases in Pitha region as both sensitivity and specificity is higher.

Kappa agreement is higher in Kaba, which says interrater agreement between affected region diagnosed(Afd) and Affected region Naadi diagnosed(Afn) is high which means both tools says that it was very difficult to detect diseases in Kabha region and it had strong level of agreement with respect to Pitha and Kaba and moderate level of agreement in Vatha region.

10.18 STATISTICAL EVALUATION:

Frequency Table of Diagnosed cases

Already Diagnosed	Frequency	Percent
V	192	38.4
P	26	5.2
K	6	1.2
VP	214	42.8
VK	30	6.0
PK	12	2.4
VPK	20	4.0
Total	500	100.0

Table: 35

Naadi	Frequency	Percent
V	177	35.4
P	13	2.6
K	4	0.8
VP	235	47.0
VK	31	6.2
PK	8	1.6
VPK	28	5.6
Total	496	99.2
Missing	4	0.8
	500	100.0

Table: 36

Diff	Frequency	Percent
-122.00	3	0.6
-121.00	2	0.4
-111.00	7	1.4
-110.00	2	0.4
-100.00	4	0.8
-21.00	1	0.2
-12.00	5	1.0
-11.00	34	6.8
-10.00	13	2.6
-1.00	2	0.4
.00	382	76.4
1.00	3	0.6
10.00	2	0.4
11.00	22	4.4
12.00	4	0.8
110.00	1	0.2
111.00	8	1.6
122.00	1	0.2
Total	496	99.2
Missing	4	0.8
	500	100.0

Table: 37

From the above difference table it is clear that we have 76.4% is the perfect agreement.

The above table states that there was 76.4% perfect agreement between the Naadi and Already diagnosed .These results imply to our data in particular.

To generalise the results we proceeded with statistical technique called kappa analysis to findout the interrater agreement inbetween the two methods. (or to validate the naadi with already diagnosed)

Naadi * Already Diagnosed Crosstabulation									
Count									
		Already Diagnosed							Total
		V	P	K	VP	VK	PK	VPK	
Naadi	V	150	1	0	21	4	0	1	177
	P	1	12	0	0	0	0	0	13
	K	0	0	3	0	1	0	0	4
	VP	33	10	0	181	2	1	8	235
	VK	5	0	3	1	20	1	1	31
	PK	0	1	0	1	0	6	0	8
	VPK	3	2	0	7	2	4	10	28
Total		192	26	6	211	29	12	20	496

Table : 38

Table: 39 Symmetric Measures					
		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Agreement	Kappa	.648	.028	21.979	.000
N of Valid Cases		496			

Table : 39

From the above analysis it is clear that 64.8% is the perfect agreement.

Cohnes'k was run to determine or check whether there was agreement between already diagnosed and naadi .There was a good agreement between the two diagnosis .k=0.648(95% C.I) since $p = .000$ (which actually means $p < 0.001$), our kappa (κ) coefficient is statistically significantly different from zero.

There isn't clear-cut agreement on what constitutes good or poor levels of agreement based on Cohen's kappa, although a common, although not always so useful, set of criteria is: less than 0% no agreement, 0-20% poor, 20-40% fair, 40-60% moderate, 60-80% good, 80% or higher very good.

VATHAM

Already Diagnosed	Frequency	Percent
V	192	42.1
VP	214	46.9
VK	30	6.6
VPK	20	4.4
Total	456	100.0

Table: 40

diff	Frequency	Percent
-122	3	0.7
-111	7	1.5
-110	2	0.4
-12	5	1.1
-11	34	7.5
-1	2	0.4
0	361	79.2
1	2	0.4
10	1	0.2
11	21	4.6
12	4	0.9
110	1	0.2
111	8	1.8
122	1	0.2
Total	452	99.1
Missing	4	0.9
Total	456	100.0

Table: 42

Naadi	Frequency	Percent
V	176	38.6
P	1	0.2
K	1	0.2
VP	224	49.1
VK	27	5.9
PK	1	0.2
VPK	22	4.8
Total	452	99.1
Missing	4	0.9
Total	456	100.0

Table: 41

From the above difference table it is clear that we have 79.2% is the perfect agreement

Naadi * AlreadyDiagnosedCrosstabulation						
Count						
		AlreadyDiagnosed				Total
		V	VP	VK	VPK	
Naadi	V	150	21	4	1	176
	P	1	0	0	0	1
	K	0	0	1	0	1
	VP	33	181	2	8	224
	VK	5	1	20	1	27
	PK	0	1	0	0	1
	VPK	3	7	2	10	22
Total		192	211	29	20	452

Table: 43

Symmetric Measures					
		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Agreement	Kappa	.663	.031	18.505	.000
N of Valid Cases		452			

Table: 44

PITHAM

Already Diagnosed	Frequency	Percent
P	26	9.6
VP	214	78.7
PK	12	4.4
VPK	20	7.4
Total	272	100.0

Table: 45

Naadi	Frequency	Percent
V	23	8.5
P	12	4.4
VP	200	73.5
VK	3	1.1
PK	8	2.9
VPK	23	8.5
Total	269	98.9
Missing	3	1.1
Total	272	100.0

Table: 46

Diff	Frequency	Percent
-121	2	0.7
-111	7	2.6
-100	4	1.5
-21	1	0.4
-11	1	0.4
-10	10	3.7
-1	1	0.4
0	209	76.8
1	1	0.4
10	1	0.4
11	22	8.1
110	1	0.4
111	8	2.9
122	1	0.4
Total	269	98.9
Missing	3	1.1
Total	272	100.0

Table: 47

Symmetric Measures					
		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Agreement	Kappa	.449	.054	12.524	.000
N of Valid Cases		269			

Table: 48

KABAM

Already Diagnosed	Frequency	Percent
K	6	8.8
VK	30	44.1
PK	12	17.6
VPK	20	29.4
Total	68	100.0

Table: 49

Naadi	Frequency	Percent
V	5	7.4
K	4	5.9
VP	11	16.2
VK	25	36.8
PK	6	8.8
VPK	16	23.5
Total	67	98.5
Missing	1	1.5
Total	68	100.0

Table: 50

Diff	Frequency	Percent
-110	2	2.9
-100	4	5.9
-10	3	4.4
0	39	57.4
1	2	2.9
10	2	2.9
11	1	1.5
12	4	5.9
110	1	1.5
111	8	11.8
122	1	1.5
Total	67	98.5
Missing	1	1.5
Total	68	100.0

Table: 51

Naadi * AlreadyDiagnosedCrosstabulation						
Count						
		AlreadyDiagnosed				Total
		K	VK	PK	VPK	
Naadi	V	0	4	0	1	5
	K	3	1	0	0	4
	VP	0	2	1	8	11
	VK	3	20	1	1	25
	PK	0	0	6	0	6
	VPK	0	2	4	10	16
Total		6	29	12	20	67

Table: 52

Symmetric Measures					
		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Agreement	Kappa	.440	.073	7.044	.000
N of Valid Cases		67			

Table: 53

Table: 54 Gender distribution of Already Diagnosed participants affected with particular systems

No	System	Male	female	Total (Out of 500)
1	Musculoskeletal system	196(39.2%)	235(47%)	431(86.2%)
2	Cardiovascular sustem	73(14.6%)	78(15.6%)	151(30.2%)
3	Endocrine system	85(17%)	98(19.6%)	183(36.6%)
4	Respiratory system	38(7.6%)	35(7%)	73(14.6%)
5	Digestive system	31(6.2%)	26(5.2%)	57(11.4%)
6	Excretory System	11(2.2%)	4(0.8%)	15(3%)
7	Reproductive system	5(1%)	11(2.2%)	16(3.2%)
8	Central nervous System	15(3%)	4(0.8%)	19(3.8%)
9	Integumentary Sysetm	14(2.8%)	23(4.6%)	37(7.4%)
10	Immune System	0(0.00%)	6(1.2%)	6(1.2%)
11	Sense organs	2(0.4%)	3(0.6%)	5(1%)

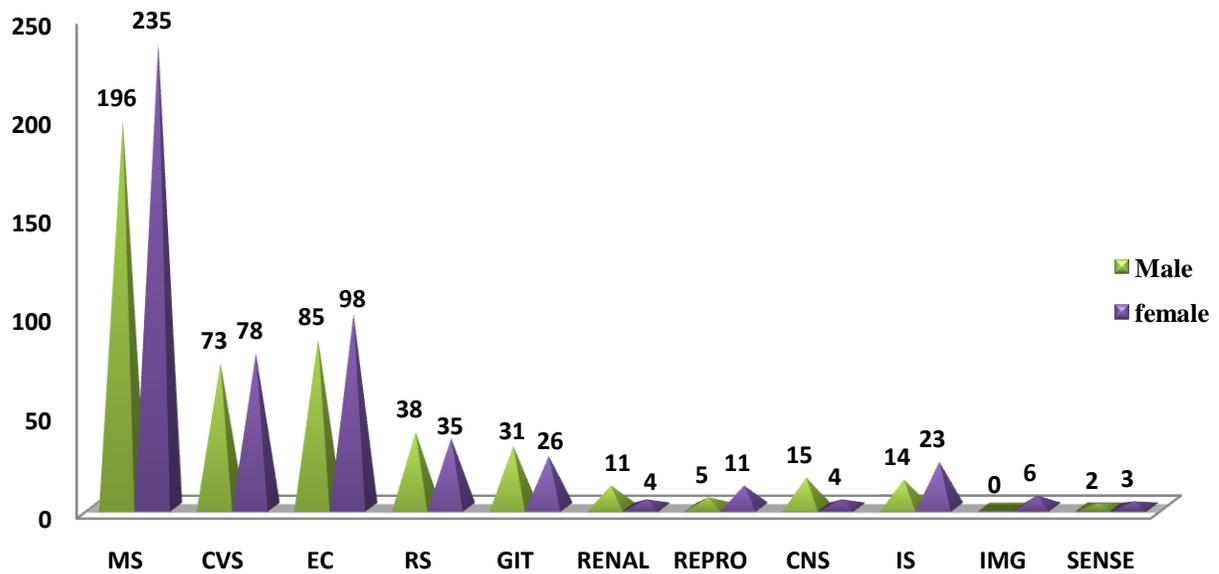


Figure: 41 Gender distribution of Already Diagnosed participants affected with particular systems

Observation:

Majority of the participants (86.2%) had problem in musculoskeletal system followed by Endocrine system (36.6%) and Cardiovascular system (30.2%). 14.6% and 11.6% had problem in Respiratory system and Digestive system respectively. 7.4% participants had problem with Integumentary system while 3.8%,3.2% and 3% participants had problem with Central Nervous system, Reproductive system and excretory system respectively. Very less number of participants had problem in Immune system (1.2%) and Sense organs(1%).

Inference:

Majority of the participants had problem related with musculoskeletal system.

Table: 55 Ager distribution of Already Diagnosed participants affected with particular systems

No	System	Below 30	31-40	41-50	51-60	above 60	Total
1	Musculoskeletal system	9	50	85	93	194	431
2	Cardiovascular sustem	1	3	18	34	95	151
3	Endocrine system	3	12	29	38	101	183
4	Respiratory system	8	5	5	10	45	73
5	Digestive system	2	11	12	7	25	57
6	Excretory System	0	3	3	2	7	15
7	Reproductive system	3	4	5	0	4	16
8	Central nervous System	5	2	4	2	6	19
9	Integumentary Sysetm	2	0	6	6	23	37
10	Immune System	0	0	4	1	1	6
11	Sense organs	0	0	0	3	2	5

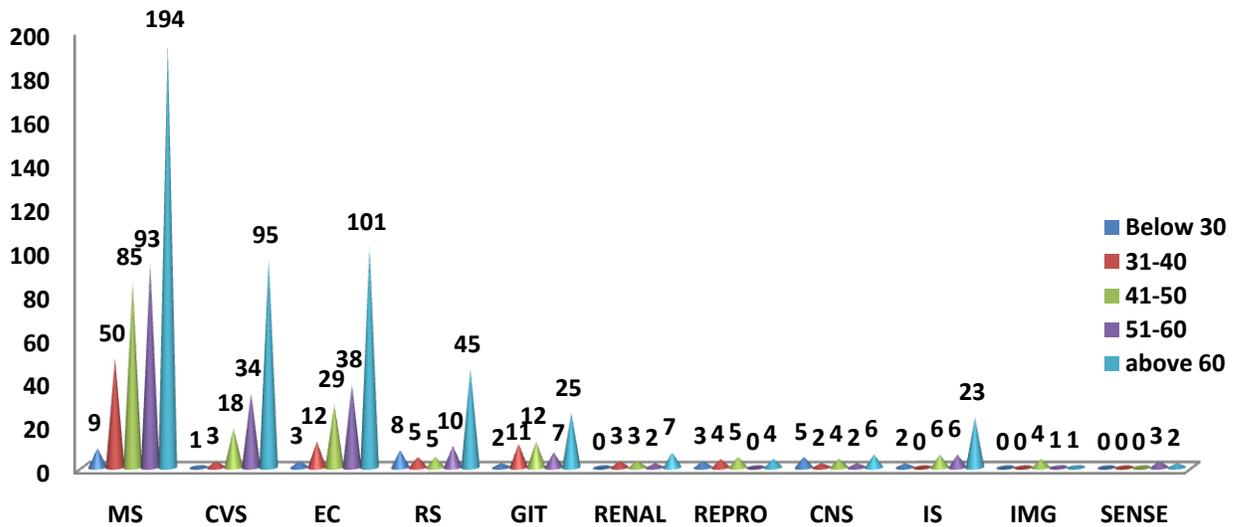


Figure: 42 Age distribution of Already Diagnosed participants affected with particular systems

Observation:

Majority of the participants who had affected musculoskeletal system fell under the age group 61-85(geriatric group) followed by 51-60, 41-50, 31-40, and 15-30 age groups in a descending order. The same pattern is followed in Cardiovascular system and Endocrine system. Majority of the participants affected with a particular system fell under the geriatric age group(61-85

Table: 56 Gender distribution of Naadi Diagnosed participants affected with particular systems

No	System	Male	Female	Total
1	Musculoskeletal system	225(45%)	243(48.6%)	468(93.3%)
2	Cardiovascular sustem	67(13.4%)	56(11.2%)	123(24.6%)
3	Endocrine system	80(16%)	94(18.8%)	174(34.8%)
4	Respiratory system	45(9%)	36(7.2%)	81(16.2%)
5	Digestive system	28(5.6%)	32(6.4%)	60(12%)
6	Excretory System	9(1.8%)	11(2.2%)	20(4%)
7	Reproductive system	8(1.6%)	19(3.8%)	27(5.4%)
8	Central nervous System	14(2.8%)	4(0.8%)	18(3.6%)
9	Integumentary Sysetm	1(0.2%)	0(0%)	1(0.2%)
10	Immune System	0(0%)	3(0.6%)	3(0.6%)
11	Sense organs	1(0.2%)	2(0.4%)	3(0.6%)

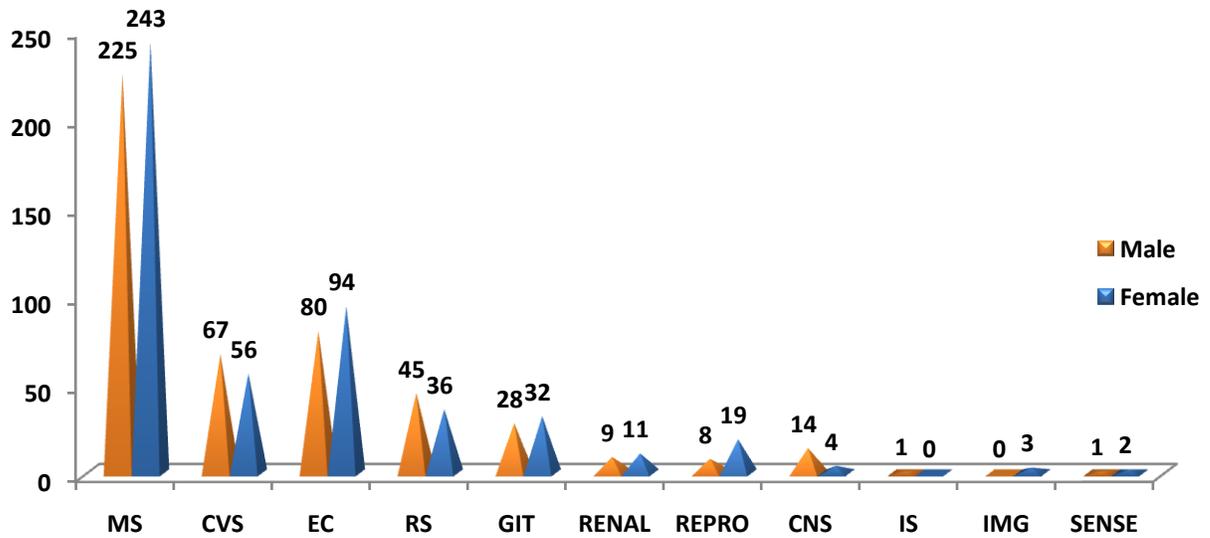


Figure: 43 Gender distribution of Naadi Diagnosed participants affected with particular systems

Observation:

According to naadi diagnosis majority of the participants (93.3%) had problem in musculoskeletal system followed by Endocrine system (34.8%) and Cardiovascular system (24.6%). 16.2% and 12% were identified as problem in Respiratory system and Digestive system respectively. Naadi diagnosed 3.6% participants were affected with central nervous system while 5.4% and 4% participants were affected with Reproductive system and excretory system respectively. Very less number of participants had problem in Immune system (0.6%) and Sense organs (0.6%). Lowest numbers of participants (0.2%) were identified as problem in Integumentary system.

Inference:

As per Naadi perception majority of the participants were affected with musculoskeletal system.

Table: 57 Age distribution of Naadi Diagnosed participants affected with particular systems

No	System	Below 30	31-40	41-50	51-60	above 60	Total
1	Musculoskeletal system	12	55	92	95	214	468
2	Cardiovascular sustem	0	4	12	25	82	123
3	Endocrine system	3	11	27	39	94	174
4	Respiratory system	11	11	5	12	42	81
5	Digestive system	4	14	14	7	21	60
6	Excretory System	0	3	5	1	11	20
7	Reproductive system	3	8	9	4	3	27
8	Central nervous System	4	2	4	2	6	18
9	Integumentary Sysetm	0	0	0	0	1	1
10	Immune System	0	0	2	1	0	3
11	Sense organs	0	0	1	1	1	3

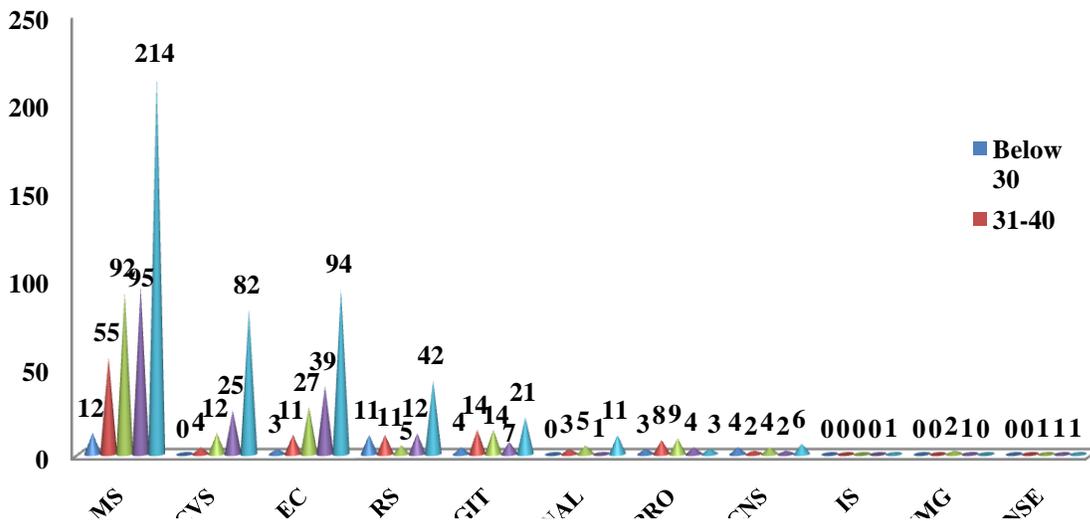


Figure: 44 Age distribution of Naadi Diagnosed participants affected with particular systems

Observation:

As per Naadi diagnosis majority of the participants affected musculoskeletal system fell under the age group 61-85(geriatric group) followed by 51-60, 41-50, 31-40, and 15-30 age groups in a descending order. The same pattern is followed in Cardiovascular system and Endocrine system. Majority of the participants affected with a particular system fell under the geriatric age group (61-85)

Table: 58 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with musculoskeletal system

Age	No of patients	
	Diagnosed	Naadi Diagnosed
Below 30	9(2.09%)	12(2.56%)
31-40	50(11.6%)	55(11.75%)
41-50	85(19.72%)	92(19.66%)
51-60	93(21.58%)	95(20.3%)
Above 61	194(45.01%)	214(45.73%)
Total	431	468

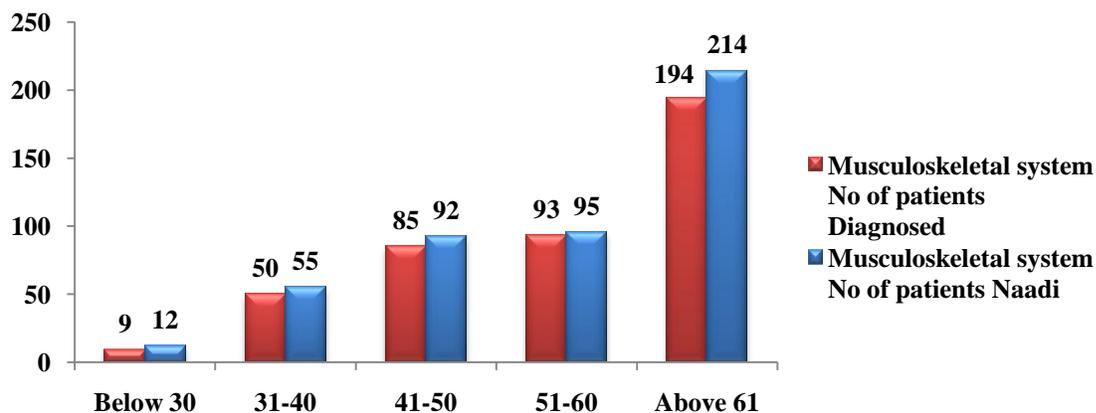


Figure: 45 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with musculoskeletal system

Observation:

Majority of the participants affected with musculoskeletal system fell under the age group of 61-85 followed by 51-60, 41-50, 31-40, 15-30 age groups in both already diagnosed and diagnosed by Naadi.

Table: 59 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with cardiovascular system

Age	No of patients	
	Diagnosed	Naadi
Below 30	1(0.66%)	0(0%)
31-40	3(1.99%)	4(3.25%)
41-50	18(11.92%)	12(9.76%)
51-60	34(22.52%)	25(20.33%)
Above 61	95(62.91%)	82(66.66%)
Total	151	123

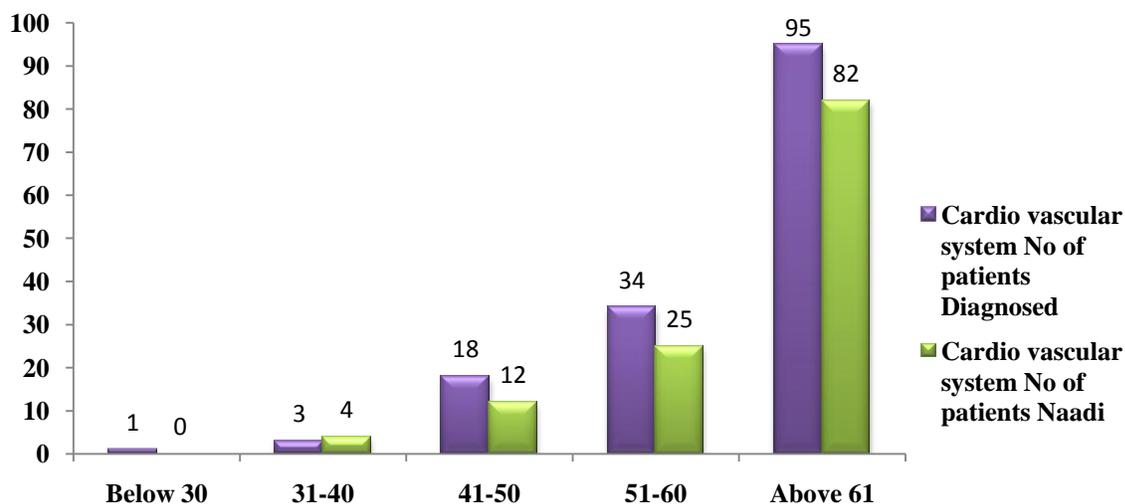


Figure: 46 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with cardiovascular system

Observation:

Majority of the participants affected with musculoskeletal system fell under the age group of 61-85 followed by 51-60, 41-50, 31-40, 15-30 age groups in both already diagnosed and diagnosed by Naadi.

Table: 60 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Endocrine system

Age	No of patients	
	Diagnosed	Naadi
Below 30	3(1.64%)	3(1.72%)
31-40	12(6.56%)	11(6.32%)
41-50	29(15.85%)	27(15.51%)
51-60	38(20.77%)	39(22.41%)
Above 61	101(55.19%)	94(54.02%)
Total	183	174

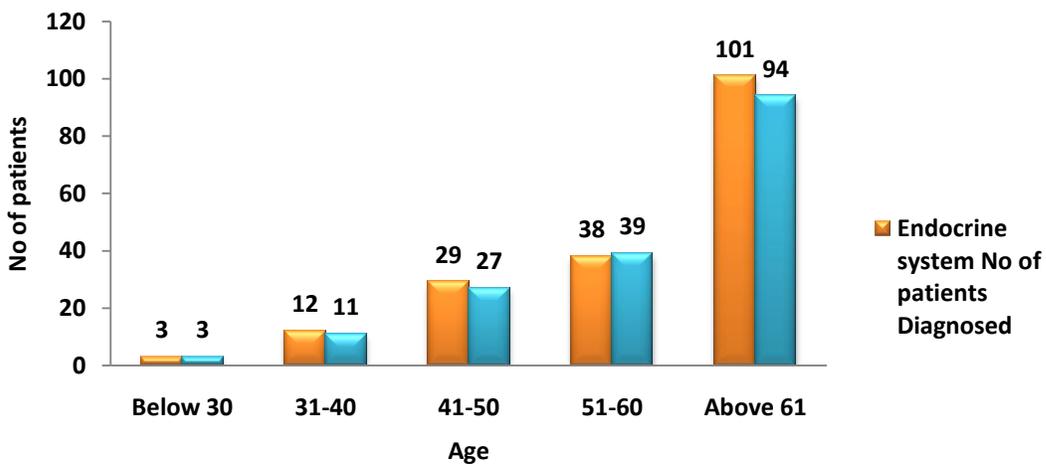


Figure: 47 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Endocrine system

Observation:

Majority of the participants affected with endocrine system fell under the age group of 61-85 and fewer in 15-30 age group.

Table: 61 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Respiratory system

Age	No of patients	
	Diagnosed	Naadi
Below 30	8(10.96%)	11(13.58%)
31-40	5(6.85%)	11(13.58%)
41-50	5(6.85%)	5(6.17%)
51-60	10(13.7%)	12(14.81%)
Above 61	45(61.64%)	42(51.85%)
Total	73	81

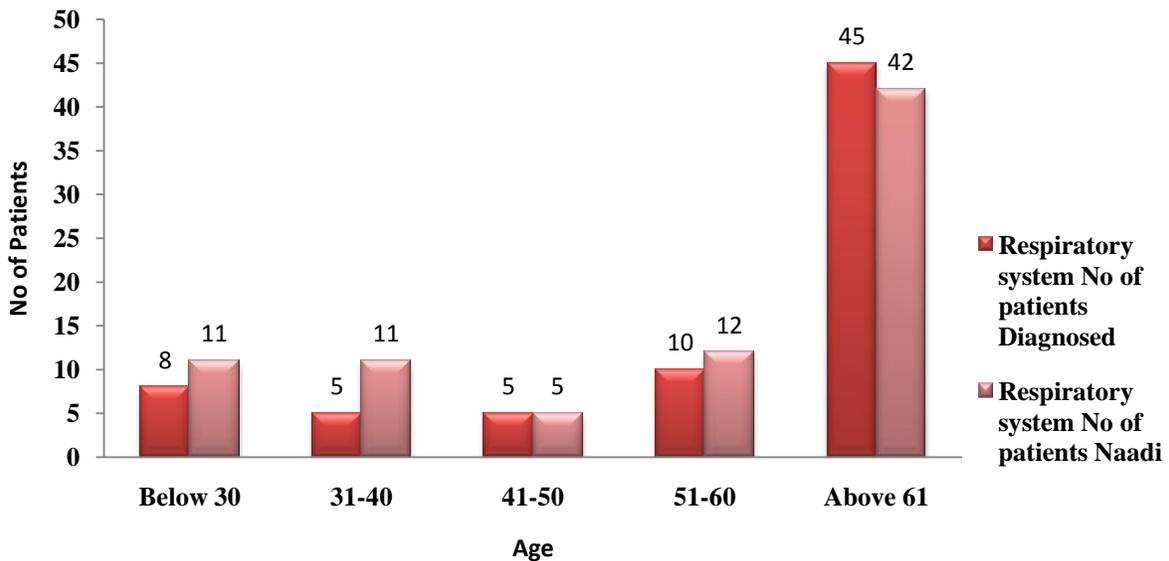


Figure: 48 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Respiratory system

Observation:

Majority of the participants affected with Respiratory system fell under the age group of 61-85.

Table: 62 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Digestive system

Age	No of patients	
	Diagnosed	Naadi
Below 30	2(3.5%)	4(6.66%)
31-40	11(19.3%)	14(23.33%)
41-50	12(21.05%)	14(23.33%)
51-60	7(12.28%)	7(11.66%)
Above 61	25(43.86%)	21(35%)
Total	57	60

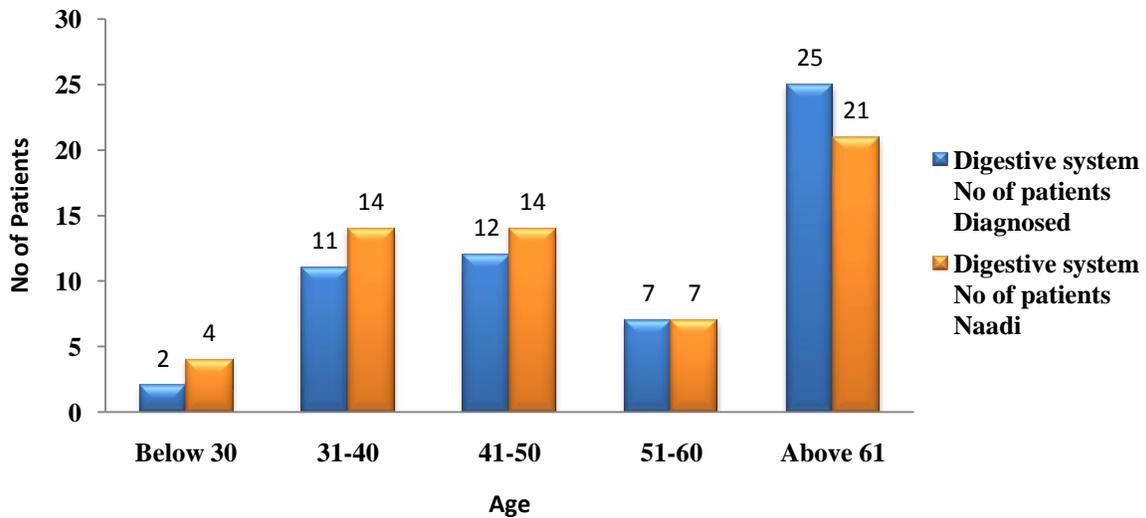


Figure: 49 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Digestive system

Observation:

Majority of the participants affected with Digestive system fell under the age group of 61-85.

Table: 63 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with excretory system

Age	No of patients	
	Diagnosed	Naadi
Below 30	0(0%)	0(0%)
31-40	3(20%)	3(15%)
41-50	3(20%)	5(25%)
51-60	2(13.33%)	1(5%)
Above 61	7(46.66%)	11(55%)
Total	15	20

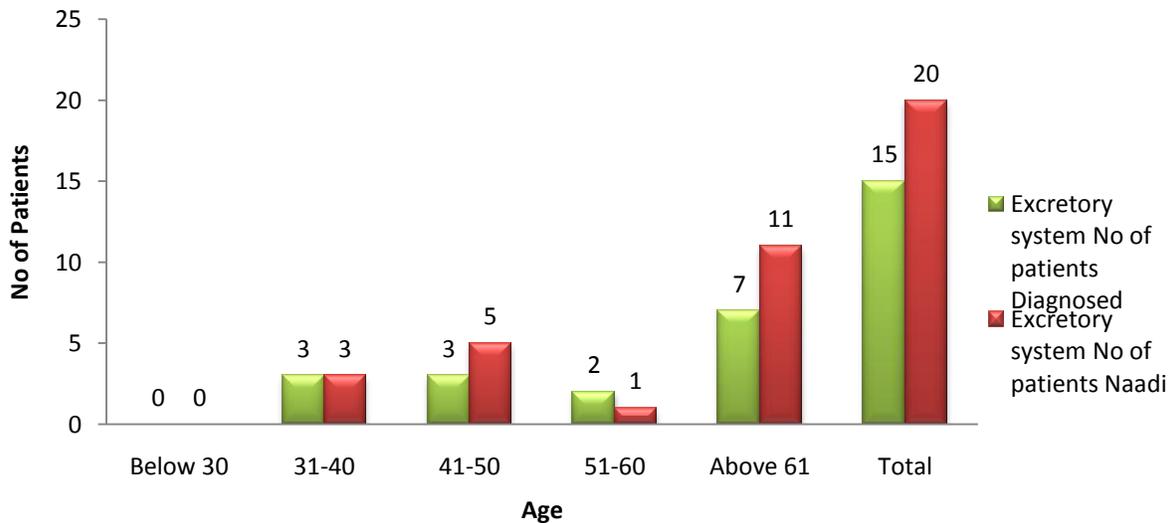


Figure: 50 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with excretory system

Observation:

Majority of the participants affected with Excretory system fell under the age group of 61-85

Table: 64 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Reproductive system

Age	No of patients	
	Diagnosed	Naadi
Below 30	3(18.75%)	3(11.11%)
31-40	4(25%)	8(29.63%)
41-50	5(31.25%)	9(33.33%)
51-60	0(0%)	4(14.81%)
Above 61	4(25%)	3(11.11%)
Total	16	27

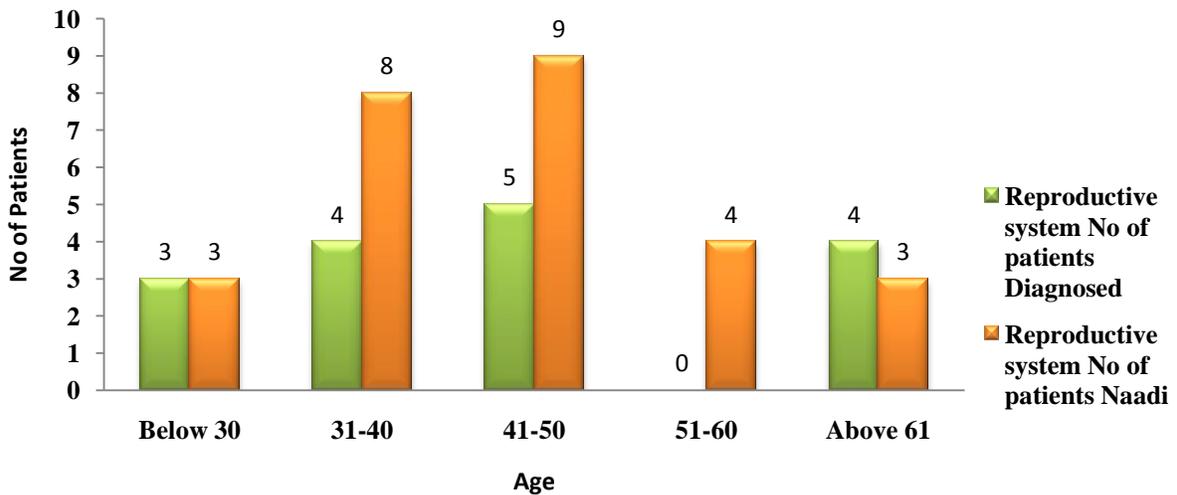


Figure: 51 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Reproductive system

Observation:

Majority of the participants affected with Reproductive system fell under the age group of 41-50

Table: 65 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Central nervous system

Age	No of patients	
	Diagnosed	Naadi
Below 30	5(26.32%)	4(22.22%)
31-40	2(10.53%)	2(11.11%)
41-50	4(21.05%)	4(22.22%)
51-60	2(10.53%)	2(11.11%)
Above 61	6(31.58%)	6(33.33%)
Total	19	18

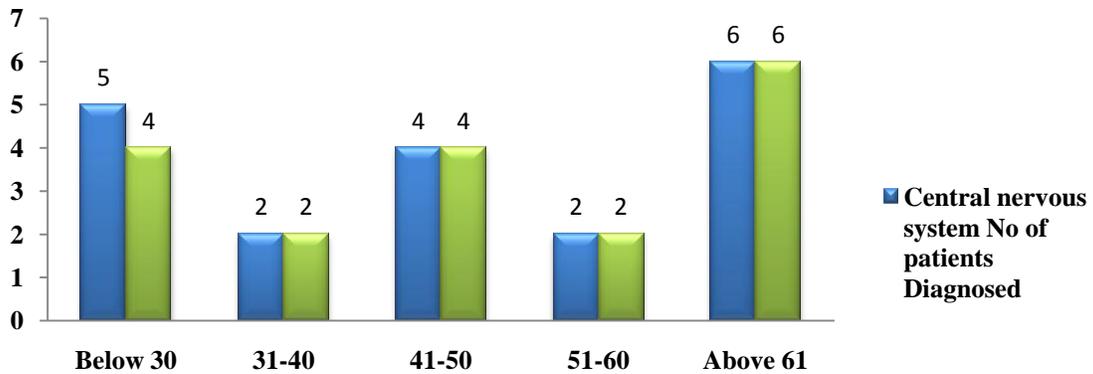


Figure: 52 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Central nervous system

Observation:

Majority of the participants affected with Central nervous system fell under the age group of 61-85

Table: 66 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with integumentary system

Age	No of patients	
	Diagnosed	Naadi
Below 30	2(5.4%)	0(0%)
31-40	0(0%)	0(0%)
41-50	6(16.21%)	0(0%)
51-60	6(16.21%)	0(0%)
Above 61	23(62.16%)	1(62.16%)
Total	37	1

Observation:

Majority of the diagnosed participants affected with Integumentary system fell under the age group 61-85

Table: 67 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Immune system

Sl No	Age	No of patients	
		Diagnosed	Naadi
1	Below 30	0(0%)	0(0%)
2	31-40	0(0%)	0(0%)
3	41-50	4(66.66%)	2(66.66%)
4	51-60	1(16.66%)	1(33.33%)
5	Above 61	1(16.66%)	0(0%)
6	Total	6	3

Observation:

Majority of the diagnosed participants affected with Immune system fell under the age group 41-50

Table: 68 Age distribution of Already Diagnosed and Naadi diagnosed participants affected with Special senses

SI No	Age	No of patients	
		Diagnosed	Naadi
1	Below 30	0(0%)	0(0%)
2	31-40	0(0%)	0(0%)
3	41-50	0(0%)	1(33.33%)
4	51-60	3(60%)	1(33.33%)
5	Above 61	2(40%)	1(33.33%)
6	Total	5	3

Observation:

Majority of the diagnosed participants affected with Sensory organs fell under the age group 51-60

Table: 69 Comparison of different system (already diagnosed and Naadi diagnosed)

SI No	System	System Diagnosed (SD)	System Diagnosed by Naadi (SN)	SD Vs SN
1	Musculoskeletal system	431	468	425
2	Cardiovascular system	151	123	103
3	Endocrine system	183	174	155
4	Respiratory system	73	81	59
5	Digestive ssystem	57	60	42
6	Excretory system	15	20	10
7	Reproductive system	16	27	14
8	Central nervous system	19	18	16
9	Integumentary system	37	1	0
10	Immune system	6	3	2
11	Sense organs	5	3	1

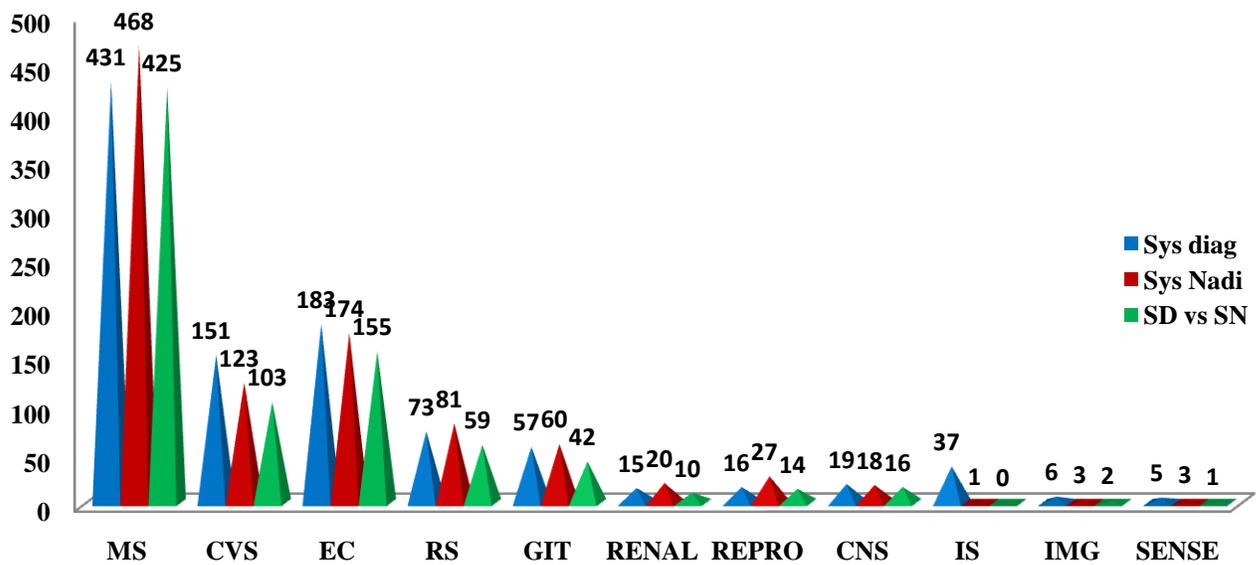


Figure: 53 Comparison of different system (already diagnosed and Naadi diagnosed)

Table: 70 Sensitivity of different systems diagnosed by Naadi:

Sl No	System	Sensitivity
1	Musculoskeletal system	98.61%
2	Cardiovascular system	68.21%
3	Endocrine system	84.70%
4	Respiratory system	80.82%
5	Digestive syytem	73.68%
6	Excretory system	66.67%
7	Reproductive system	87.50%
8	Central nervous system	84.21%
9	Integumentary system	0.00%
10	Immune system	33.33%
11	Sense organs	20.00%

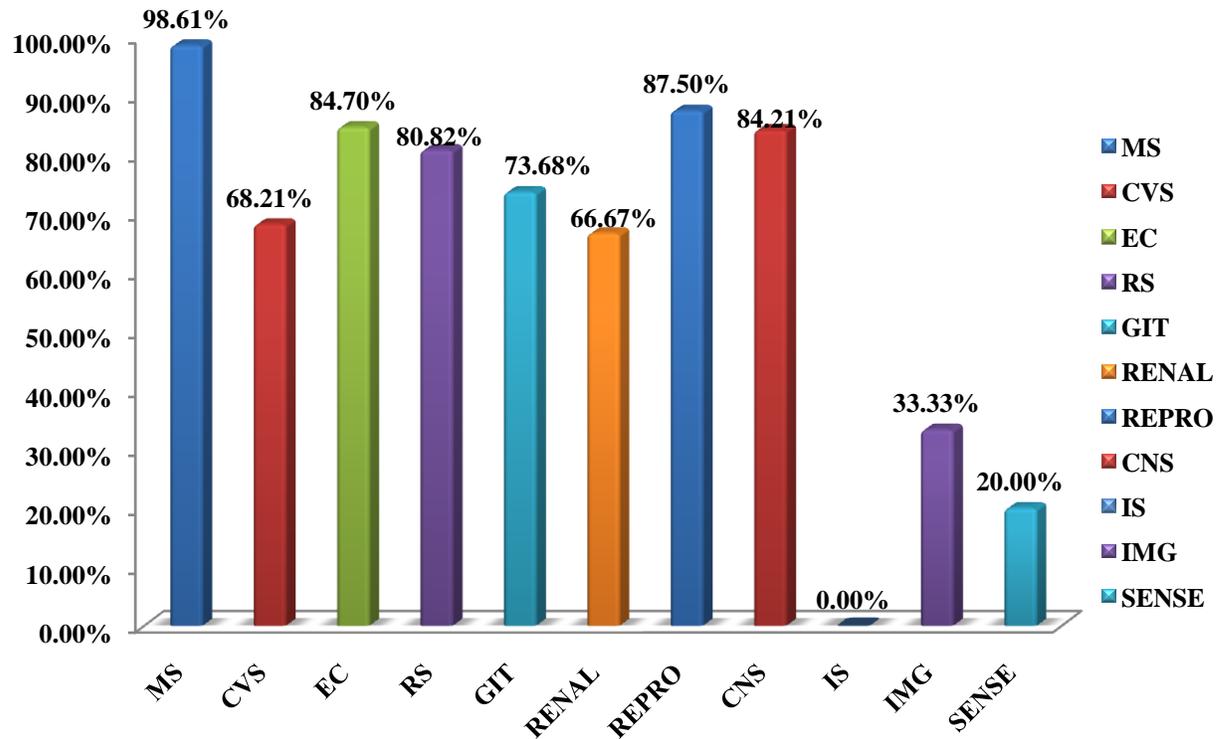


Figure: 54 Sensitivity of different system diagnosed by Naadi

Observation:

Sensitivity is more in Musculoskeletal system followed by reproductive system, Endocrine system, Central nervous system and Respiratory system. All the above said system has the specificity more than 80%

Table: 71 Specificity of different system diagnosed by Naadi:

Sl No	System	Specificity
1	Musculoskeletal system	37.68%
2	Reproductive system	94.27%
3	Endocrine system	94.01%
4	Central nervous system	94.85%
5	Respiratory system	95.94%
6	Digestive sysytem	97.94%
7	Cardiovascular system	97.31%
8	Excretory system	99.58%
9	Immune system	99.78%
10	Sense organs	99.80%
11	Integumentary system	99.60%

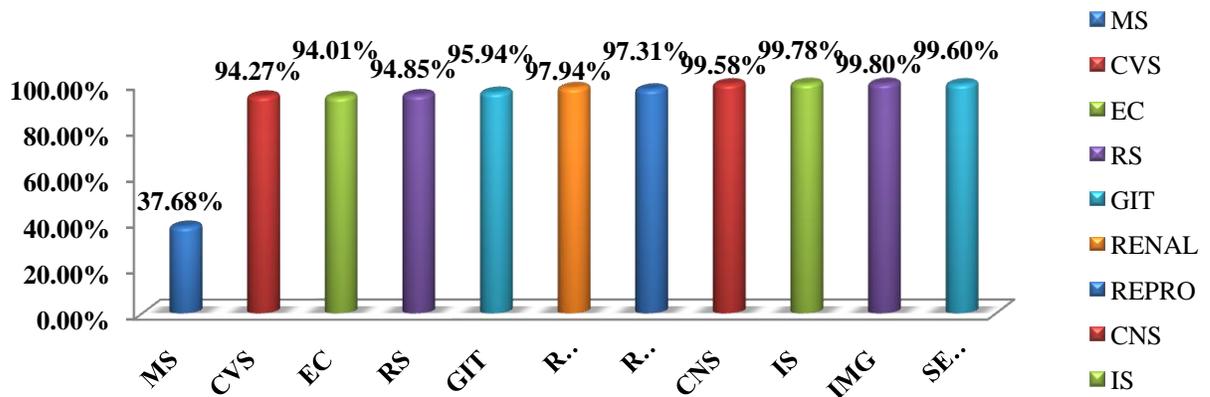


Figure: 55 Specificity of different system diagnosed by Naadi:

Observation:

Sensitivity is less in musculoskeletal system

Table: 72 Positive predictive value of different system diagnosed by Naadi:

SI No	System	Positive predictive value
1	Musculoskeletal system	90.81%
2	Reproductive system	83.74%
3	Endocrine system	89.08%
4	Central nervous system	72.84%
5	Respiratory system	70.00%
6	Digestive system	50.00%
7	Cardiovascular system	51.85%
8	Excretory system	88.89%
9	Immune system	0.00%
10	Sense organs	66.67%
11	Integumentary system	33.33%

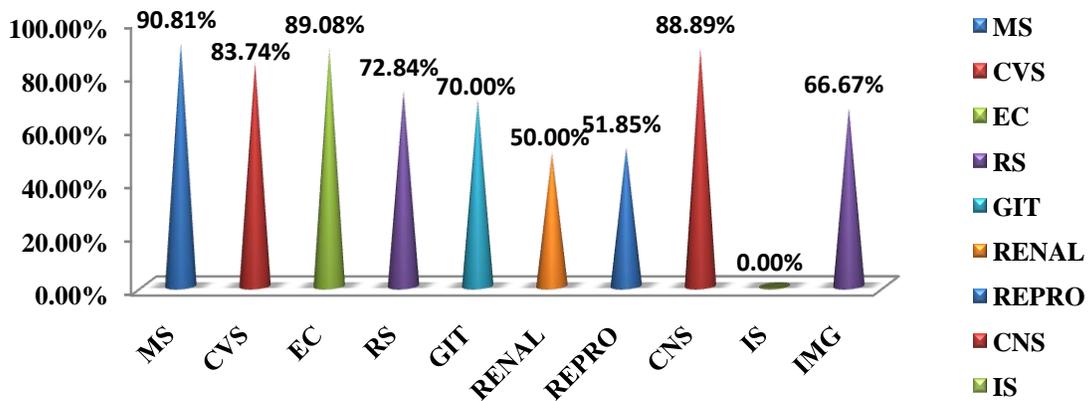


Figure: 56 Positive predictive value of different system diagnosed by Naadi

Table: 73 Negative predictive value of different system diagnosed by Naadi:

Sl No	System	Negative predictive value
1	Musculoskeletal system	81.25%
2	Reproductive system	87.27%
3	Endocrine system	91.41%
4	Central nervous system	96.66%
5	Respiratory system	96.59%
6	Digestive sysytem	98.96%
7	Cardiovascular system	99.58%
8	Excretory system	99.38%
9	Immune system	92.59%
10	Sense organs	99.20%
11	Integumentary system	99.20%

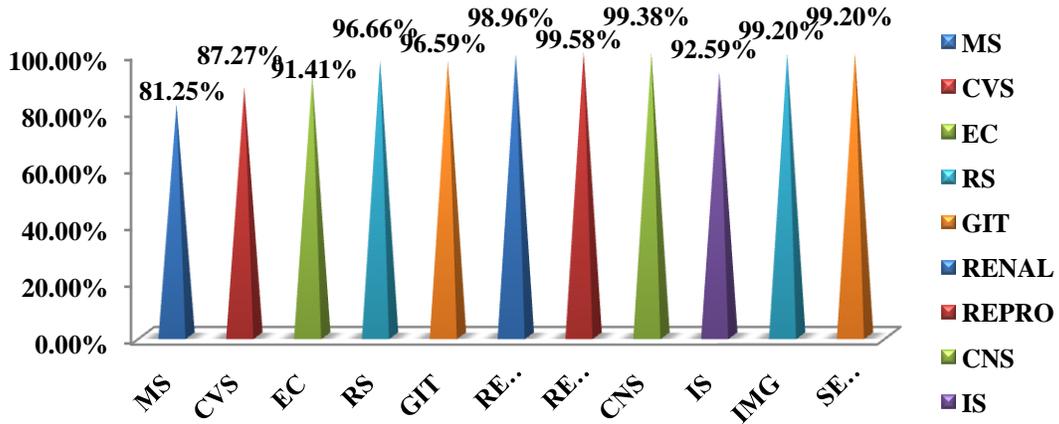


Figure: 57 Negative predictive value of different system diagnosed by Naadi:

Table: 74 Sensitivity of Diseases Diagnosed by Naadi

Sl no	Disease	Sensitivity	Sl no	Disease	Sensitivity
1	Cervical spondylosis (Kumbavatham)	85.11%	19	Uterus/Ovary	83.33%
2	Lumbar Spondylosis (Thandagavatham)	85.29%	20	Vagina/Vulva	50.00%
3	Osteo Arthritis (Azhai keelvayu)	87.72%	21	Brain /Hemiplegia	88.89%
4	Other Arthritis	37.50%	22	Dermatitis /Psoriasis	2.70%
5	Hypertension	73.87%	23	Periarthritis	55.00%
6	Heart Diseases	65.38%	24	Tonsillitis	0.00%
7	Diabetes Mellitus	88.02%	25	Varicose vein	0.00%
8	Thyroid Disease	66.67%	26	Disease of foot	52.63%
9	Lungs problem	80.33%	27	Ear problem	25.00%
10	Breast disease	50.00%	28	Sleep problem	25.00%
11	Sinusitis	91.30%	29	Eye disease	0.00%
12	Stomach problem	73.91%	30	Nervous problem	33.33%
13	Liver Diseases	33.33%	31	Migrain	88.89%
14	Ano rectal diseases	80.00%	32	Oral ulcer	0.00%
15	Kidney/Ureter	80.00%	33	Anemia	50.00%
16	UB/Urethra	40.00%	34	Throat problem	0.00%
17	Prostate	100%	35	Nail problem	0.00%
18	Penis/Scrotum	100.00%			

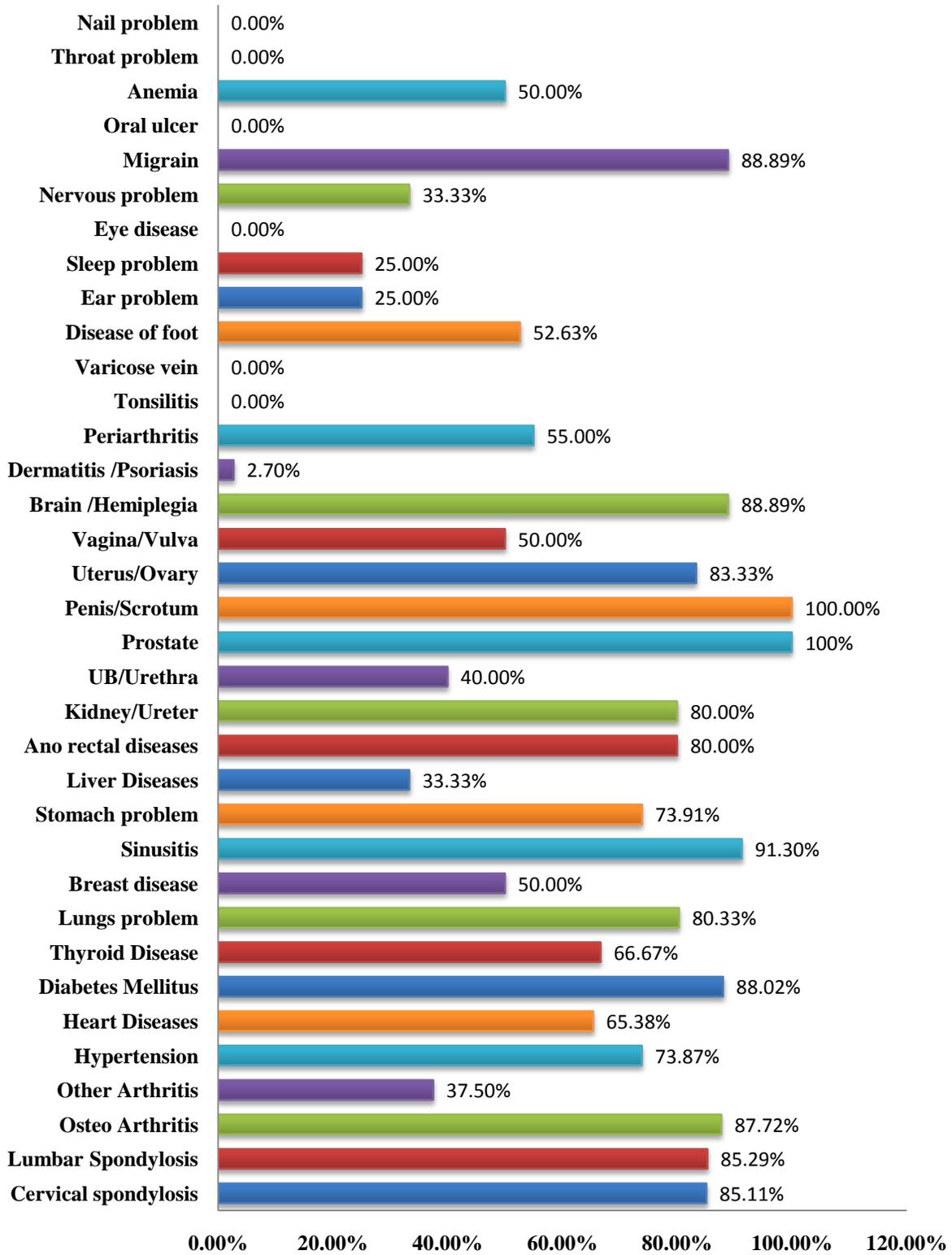


Figure: 58 Sensitivity of Diseases Diagnosed by Naadi

Table: 75 Specificity of diseases Diagnosed by Naadi

Sl No	Diseases	Specificity
1	Cervical spondylosis (Kumbavatham)	76.30%
2	Lumbar Spondylosis (Thandagavatham)	72.97%
3	Osteo Arthritis (Azhal keel vayu)	89.71%
4	Other Arthritis	99.79%
5	Hypertension	95.12%
6	Heart Diseases	98.52%
7	Diabetes Mellitus	96.40%
8	Thyroid Disease	98.12%
9	Lungs problem	97.72%
10	Breast disease	100.00%
11	Sinusitis	96.65%
12	Stomach problem	95.59%
13	Liver Diseases	99.60%
14	Ano rectal diseases	99.80%
15	Kidney/Ureter	99.80%
16	UB/Urethra	98.57%
17	Prostate	99.60%
18	Penis/Scrotum	99.20%

Sl No	Diseases	Specificity
19	Uterus/Ovary	97.57%
20	Vagina/Vulva	100.00%
21	Brain /Hemiplegia	99.80%
22	Dermatitis /Psoriasis	99.78%
23	Periarthritis	100.00%
24	Tonsilitis	99.60%
25	Varicose vein	100.00%
26	Disease of foot	99.17%
27	Ear problem	100.00%
28	Sleep problem	100.00%
29	Eye disease	100.00%
30	Nervous problem	100.00%
31	Migrain	99.59%
32	Oral ulcer	100.00%
33	Anemia	99.80%
34	Throat problem	100.00%
35	Nail problem	100.00%

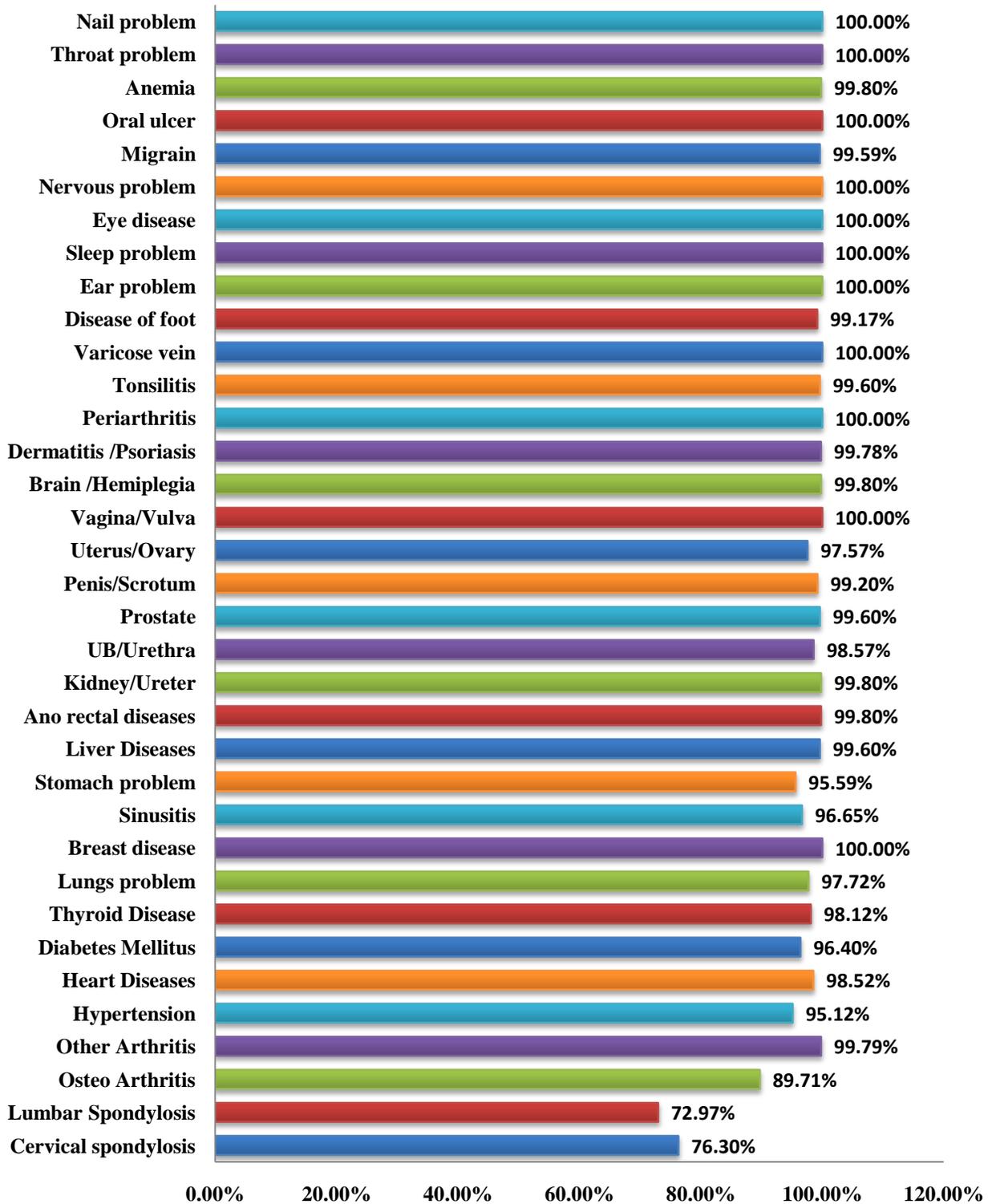


Figure: 59 Specificity of diseases Diagnosed by Naadi

Table: 76 Positive predictive value of diseases Diagnosed by Naadi :

SI No	Diseases	Positive predictive value	SI No	Diseases	Positive predictive value
1	Cervical spondylosis	45.45%	19	Uterus/Ovary	39.41%
2	Lumbar Spondylosis	68.50%	20	Vagina/Vulva	100.00%
3	Osteo Arthritis	87.72%	21	Brain /Hemiplegia	88.89%
4	Other Arthritis	90.00%	22	Dermatitis /Psoriasis	50.00%
5	Hypertension	81.19%	23	Periarthritis	100.00%
6	Heart Diseases	70.83%	24	Tonsilitis	0.00%
7	Diabetes Mellitus	92.45%	25	Varicose vein	0.00%
8	Thyroid Disease	60.87%	26	Disease of foot	71.43%
9	Lungs problem	83.05%	27	Ear problem	100.00%
10	Breast disease	100.00%	28	Sleep problem	100.00%
11	Sinusitis	56.76%	29	Eye disease	99.80%
12	Stomach problem	62.96%	30	Nervous problem	99.60%
13	Liver Diseases	33.33%	31	Migrain	80.00%
14	Ano rectal diseases	80.00%	32	Oral ulcer	99.80%
15	Kidney/Ureter	80.00%	33	Anemia	50.00%
16	UB/Urethra	36.36%	34	Throat problem	99.80%
17	Prostate	33.33%	35	Nail problem	99.80%
18	Penis/Scrotum	33.33%			

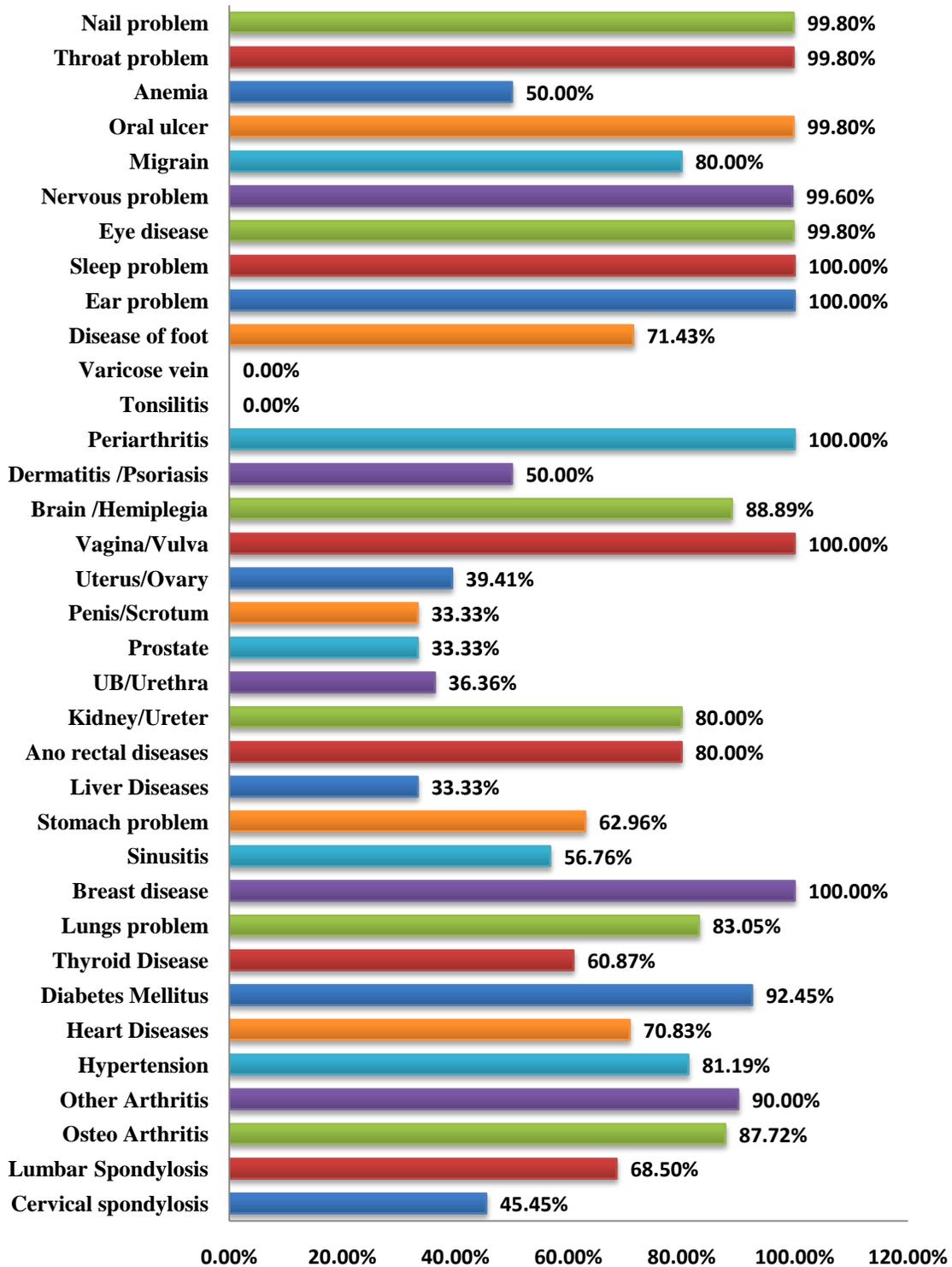


Figure: 60 Positive predictive value of diseases Diagnosed by Naadi

Table: 77 Negative predictive value of diseases Diagnosed by Naadi

SI No	Diseases	Negative predictive value	SI No	Diseases	Negative predictive value
1	Cervical spondylosis	95.67%	19	Uterus/Ovary	99.79%
2	Lumbar Spondylosis	87.80%	20	Vagina/Vulva	99.60%
3	Osteo Arthritis	89.71%	21	Brain /Hemiplegia	99.80%
4	Other Arthritis	96.94%	22	Dermatitis /Psoriasis	92.77%
5	Hypertension	92.73%	23	Periarthritis	96.23%
6	Heart Diseases	98.11%	24	Tonsilitis	100.00%
7	Diabetes Mellitus	94.13%	25	Varicose vein	97.40%
8	Thyroid Disease	98.53%	26	Disease of foot	98.15%
9	Lungs problem	97.28%	27	Ear problem	99.40%
10	Breast disease	99.80%	28	Sleep problem	99.40%
11	Sinusitis	99.57%	29	Eye disease	99.80%
12	Stomach problem	97.31%	30	Nervous problem	99.60%
13	Liver Diseases	99.60%	31	Migrain	99.80%
14	Ano rectal diseases	99.80%	32	Oral ulcer	99.80%
15	Kidney/Ureter	99.80%	33	Anemia	99.80%
16	UB/Urethra	98.77%	34	Throat problem	99.80%
17	Prostate	100.00%	35	Nail problem	99.80%
18	Penis/Scrotum	100.00%			

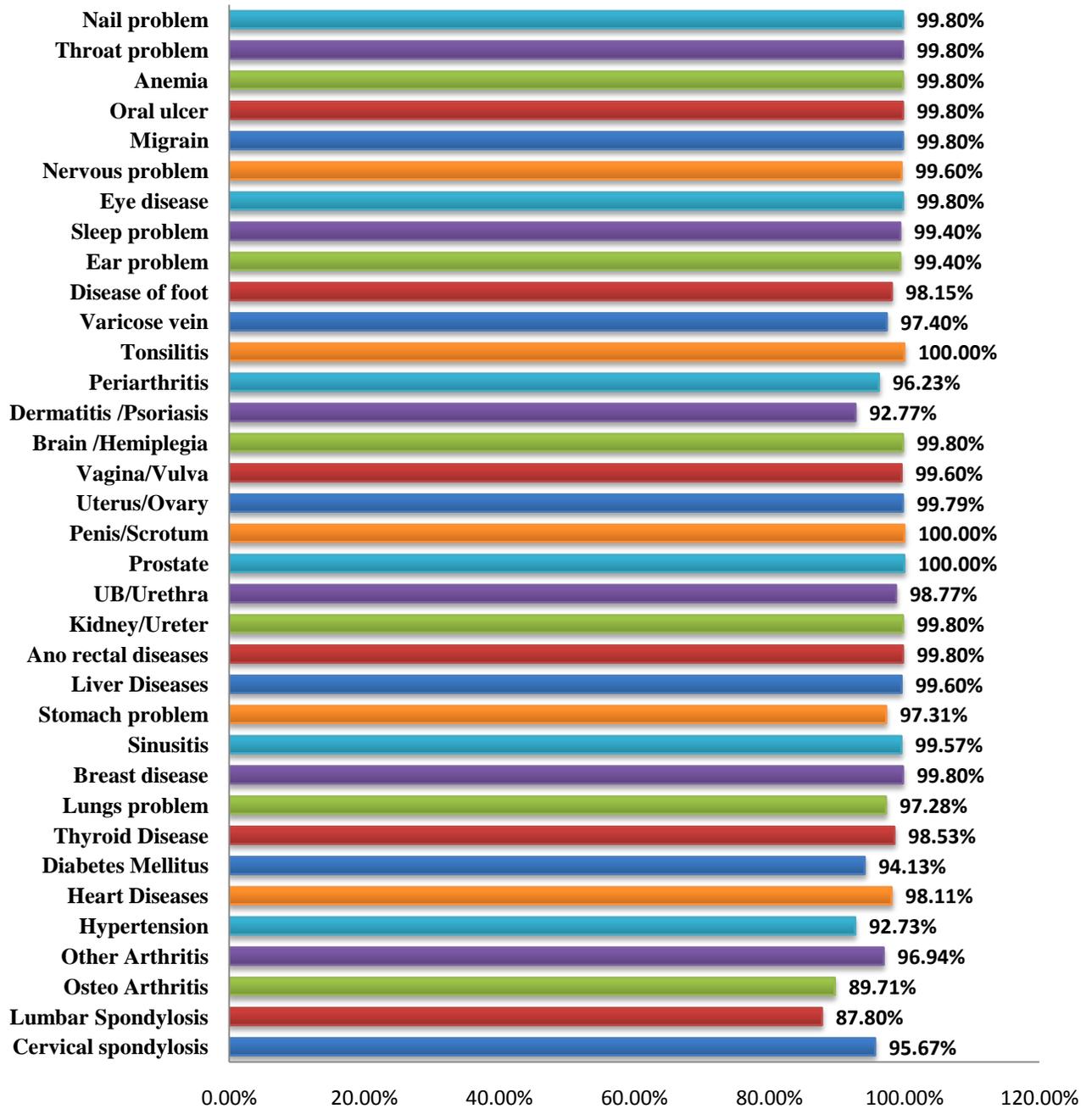


Figure: 61 Negative predictive value of diseases Diagnosed by Naadi :

Some of the Naadi patterns observed

1. **Diabetes Mellitus:**

Pendulous Naadi in Pitha region, starting from the Melpradhanam of P1 ends in the melpradhanam of P3 through the Keezhpradhanam of P2.

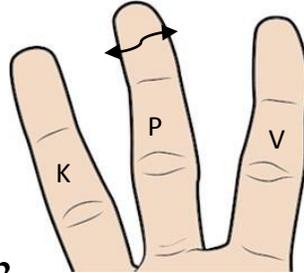


Figure: 62

2. **Heart disease:**

Sharp beat in between P1 and P2 mildly towards Chandrapradhanam with missed beat in abanan area.

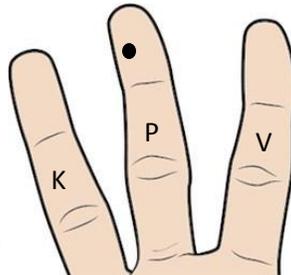


Figure: 63

3. **Kidney disease:**

Naadi in P3 area in keezh pradhanam moves towards Chandra or soorya pradhanam in left and right kidney problem respectively

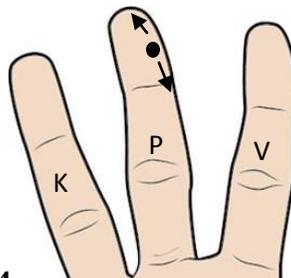


Figure: 64

4. **Lungs Diseases:**

Naadi P1 area moves towards Chandra pradhanam or Soorya pradhanam in left and right lungs problem

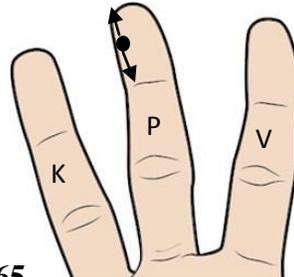


Figure: 65

5. **Stomach problem:**

Naadi in P2 Naduvidam and Chandrapradhanam

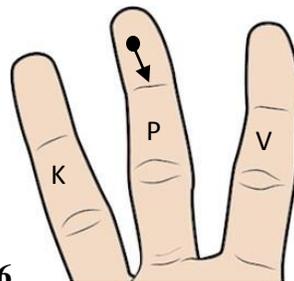


Figure: 66

6. **Hypertension:**

Naadi in K2 in Naduvidam associated with cardiac Naadi

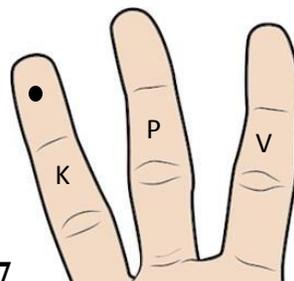


Figure: 67

7. Sinusitis:

Naadi in K3 either Soorya pradhanam or in Chandra pradhanam and mel pradhanam

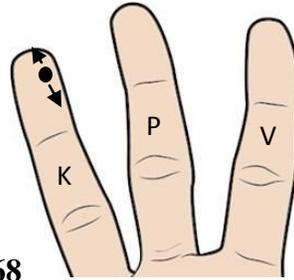


Figure: 68

8. Thyroid diseases:

In between P3 and PK in Mel pradhanam

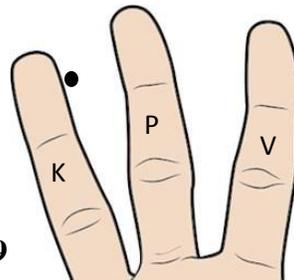


Figure: 69

9. Osteo arthritis:

V2 Naadi either Soorya pradhanam or Chandrapradhanam in right and left knee problem respectively.

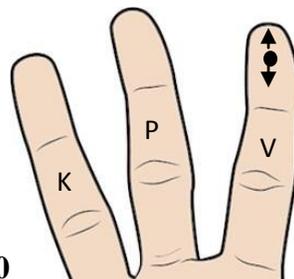


Figure: 70

10. Cervical spondylosis:

V1 Naduvidam Keezh pradhanam and a Naadi in K3 area

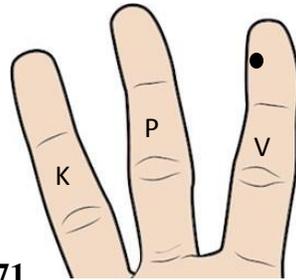


Figure: 71

11. Lumbar spondylosis:

Naadi in V3 Naduvidam Keezh pradhanam with associated Naadi in VP area.

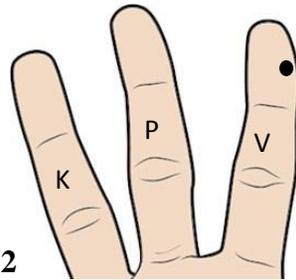


Figure: 72

12. Periarthritis of shoulder:

Naadi in V1 area which moves either in Soorya pradhanam or in Chandra pradhanam in Right and left shoulder problem.

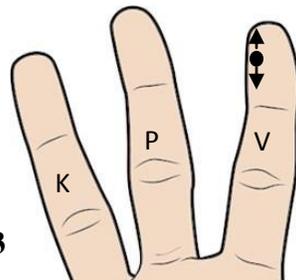


Figure: 73

11. DISCUSSION

Diagnosis is a crucial decision making in clinical practice which directly affects the outcome of the treatment given to the patient. The early the diagnosis of a disease plays a vital role in the management of diseases and its prevention of getting complicated. In siddha diagnostic method “*Envagai thervu*” Naadi plays the central role in diagnosis and is very cost effective and less time consuming also. As per literature and experienced hands, a disease can be picked up by Naadi diagnosis earlier than its external manifestations, which emphasis the importance of Naadi.

Naadi, as it is a pathway for the circulation of *Pranan* all over the body, any derangement or insufficiency of pranan can be perceived as the variation of three humours (dosham) through *Naadi* examination. As the deranged humour is a pointing guide to the treatment selection, early detection of the disease and deranged humour helps the physician to deal with appropriate *Siddha* medicine and treatments. Since it is a cost effective and non invasive diagnostic tool it will be very beneficial for the mankind.

It was decided to conduct a clinical study to evaluate and validate a cost effective, non invasive and desk side examination tool, *Naadi* (*Siddha* method of pulse reding) considering the importance of the early detection of a disease. The study was approved by the Institutional Ethics Committee (NIS/13-IEC/2017-1-24/22-11-2017) and was registered in Clinical Trial Registry of India (CTRINo: CTRI/2018/05/013604).

In this study 632 participants were screened and 500 were diagnosed by the diagnosing team which included the faculties and PG students of the Department of Noi Naadal, National Institute of Siddha. After that participants with different ailments were randomly presented to the Principal Investigator without revealing the patients’ identity, nature of ailments and other details. Then the principal investigator went about a careful reading of *Naadi* by taking adequate time to find out the subtle variation and appreciate the nuances of the *Naadi* perception. And the participants were subjected to *Naadi* examination, without the ailments been revealed to the Principal Investigator and to find out the affected region(s) in question.

The gender distribution of this study was almost equal, 49% male and 51% female precluding the gender bias. Participants aged between 15 and 85 were selected for this study. In

majority of the participants nature of *Naadi* were observed as *Thannadai* (playing in), which indicates the *Naadi* was beating in its own domain. In this study younger participants and participants devoid of chronic diseases had their *Naadi* as *Thannadai*. In obese patients and patients with established hypothyroidism the nature of *Naadi* was felt as *Illaihal* (Feeble) and it was very difficult to perceive. *Suzhalal* (Revolving) was the nature of *Naadi* that was observed in participants with severe and chronic diseases or diseases affecting major organs of the body. *Kalathal* (Blending) was the type if *Naadi* observed in most Diabetic patients. In chronic autoimmune diseases, Hemiplegia etc the pattern of *Naadi* was *Munnokku* (Advancing), as the *Vatha Naadi* advances towards *Kabam*. In lean and aged participants the pattern of *Naadi* was *Thullal* (Frisking) or *Kuthithal* (Jumping) as the superficial radial artery was superficial.

Comparing the *Naadi nadai* and affected region, majority of the participants affected with a particular region had its corresponding *Naadi nadai* as primary or secondary which indicates there is a strong correlation between the region affected and the three humours as explained by the *Siddhars* in their texts. Though the predominant *Naadi nadai* and *Dheghi* status of the participants was *Pitha Vatham*, there was a significant difference in between *Naadi nadai* and *Dheghi* status in all other participants which indicates there may not be similarities or inter connections in between *Naadi nadai* and *Dheghi* since *dheghi* is an inborn characteristic of a person while *Naadi* changes by time.

Diagnosing the affected region is the primary objective of this study. Majority of the participants in this study were affected with *Vatha* region followed by *Pitham* and least by *Kabam*. Majority of the participants affected with *Vatha* region fell under the geriatric group indicates the the period of life features with the senile pathological changes starting to appear in the *Vatham* segment of the body in an insidious way.

False positivity in the diagnosis by *Naadi* while detecting the affected region may be considered as either misdiagnosis by the principal investigator or may be pointing towards the diseases in the participants that may be still in infancy or would occur in future. That should be evaluated and documented in future. Real time accuracy of *Naadi* is significantly highest in diagnosing the diseases in *Vatha* region. In this study, sensitivity in detecting diseases in *Vatha* region is higher when compared to *Pitha* and *Kaba* region. Specificity was higher in *Kabam* region followed by *Pitham*. An ideal test has both high sensitivity and specificity. So it is ideal in

detecting diseases in *Pitha* region as both sensitivity and specificity are higher. One reason for the high sensitivity of the *Vatham* region detection could be the easy perception of the *Vatha Naadi* due to its increased amplitude compared to the other *Naadi*. Excess diagnosis may be the reason for the low specificity of detecting the true negatives and these excess diagnosed participants who are not affected with *Vatha* region should be monitored in future. Though the specificity of detecting *Kaba* region was less compared to other specificity is higher. It indicates the feeble nature lower amplitude of the *Kaba Naadi* and the difficulty to detect and differentiate.

Of all the patients (29 numbers) in whom the Principal Investigator did not detect an abnormal *Vatham Naadi*, only four of them had their actual regional involvement with disease. This indicates that even though *Vatha Naadi* is normally bouncing and can be misleading to diagnosis false positively; the Principal investigator has only missed 4 cases of *Vatham* region involvement which is indicative of the technical accuracy of *Naadi* detection by the Principal investigator.

While considering the affected region separately Kappa agreement is higher in *Kaba*, which says interrater agreement between affected region diagnosed (Afd) and Affected region *Naadi* diagnosed (Afn) is high which means both diagnostic tools say that it is very difficult to detect diseases in *Kaba* region and it had strong level of agreement with respect to *Pitha* and *Kaba* and moderate level of agreement in *Vatha* region. While considering the total results 64.8% were with perfect agreement which implies in 64.8% of the participants whole diagnosis of the Diagnosing team and *Naadi* diagnosis were equal (perfect matching) in all aspects. While considering the perfect agreement between the affected region (both individually and in combined form) 66.4% of the diagnosis of the affected *Vatha* region as individual or combination with *Pitha* and *Kaba* were perfectly equal in both the *Naadi* and conventional diagnoses and this results can be expected if any research conducted on this topic with more number of participants in future as per statistical evaluation.

Observing the different systems involved in the participants of this study majority of them had problem with musculoskeletal system. Majority of the cases especially in the 3rd tertile of the 1-100 life span, pathophysiological changes appear more pronounced in the body particularly in the musculoskeletal system and may be the reason for increased number of cases to report with body pain, joint pain etc. in the hospitals. Increased amplitude of the *Vatha Naadi*

eases the early and clear pick up of the *Naadi* related with Musculoskeletal system and hence this may be the reason for the increased sensitivity to diagnose the musculoskeletal involvement. Musculoskeletal degeneration according to age is manifested more pronounced in the body. But not all degenerative pathology manifests as disease or its symptoms. Hence *Naadi* which is a sensitive tool to pick up changes in the body is seen to have increasingly shown up in its *Vatham* component. This explains the probable reason why there is a substantial *Vatha* region false positivity detected by manifesting *Vatha Naadi* and also could be the reason why a decrease in the specificity (Increase in false positivity) of Musculoskeletal system correlation with *Naadi* findings.

The decreased sensitivity of the cardiovascular system may be due to the misinterpretation of the *Naadi* as either problem in Lungs or stomach or upper gastro intestinal tract since all these three *Naadis* are situated very close to each other. More concentration and being in a serene atmosphere while examining is needed to delineate the conditions detected through *Naadi*. Coming to the integumentary system the sensitivity is very low which could be attributed to the reason either that the *Naadi* is not a sensitive tool for finding out the skin diseases or the Principal Investigator needs more expertise in the detection of *Naadi* pulsation diagnostic of diseases involving the dermatological system. More focused works pertaining to skin diseases may be needed to find out the different *Naadi* patterns for the skin diseases.

Naadi examination achieved more than 80% sensitivity in majority of the diseases associated with musculoskeletal system but specificity is less than 80%. But sensitivity and specificity in diseases like diabetes mellitus, respiratory diseases, kidney diseases, anorectal diseases, sinusitis, and uterine are more than 80% indicates *Naadi* can be used as a sensitive tool for the screening of the above diseases. Specificity is more in majority of the diseases may be due to the involvement of lower number of participants.

Different patterns were observed in the *Naadi* during this study by which the Principal investigator reached the diagnosis. In the diseases affecting vertebrae, the *Naadi* was indicative of *Vatham* (Fore finger-V1, V2, V3) and *Nadu Vidam pradhanam* and *Keezh pradhanam*. In the problem relating to the cervical vertebrae, it was in the V1 area while the *Naadi* was in V2 in thoracic vertebral problem and in V3 in lumbosacral problem. By observing the movements of this *Vatha Naadi* towards either *Chandra pradhanam* or *Soorya pradhanam* problems related

with upper and lower limbs were diagnosed. Movements of the V1 *Naadi* either towards the *Chandra pradhanam* or *Soorya pradhanam* indicated the problem in left or right shoulder respectively. Movements of the V2 *Naadi* towards *Chandra* or *Soorya pradhanam* diagnosed as osteo arthritis of knee and movements of V3 *Naadi* indicated the problem related with the lower part of either upper or lower limb.

In *Pitha* region, a pendulous *Naadi* was observed which moves from the P1 to P3 and vice versa starting from the *Mel pradhanam* of P1 through the *Keezh pradhanam* of P2 and reaches the *Melpradhanam* of P3 diagnosed as Diabetes Mellitus. *Naadi* in P1 appears to ‘move’ either way to *Soorya* or *Chandra pradhanam* indicating the Lung disease either on the right or left side respectively. *Naadi* in between P1 and P2 mildly towards the *Chandrapradhanam* with missed beat perceived in *abanan* area (In between V1 and VP area) indicated Cardiac problem. *Naadi* in P2 region in *Nadu pradhanam* with mild movements towards the *Chandrapradhanam* indicated the problem related with stomach. In kidney diseases the *Naadi* was in P3 region moving towards *Chandra* or *Soorya pradhanam*. *Naadi* in P3 region which moved towards VP area indicated menstrual and genital related (either male or female) problems.

Hypertension *Naadi* was perceived in K2 area within *Nadu pradhanam* with mild *kamala* (cardiac) *Naadi*. While *Naadi* in K3 either towards *Soorya* or *Chandra pradhanam* indicated Sinusitis, brain related problems also been indicated by the *Kaba Naadi* when the lesion was in *Kaba* region that is the brain. Thyroid *Naadi* was observed as superficial *Naadi* in between PK and V3 region in *Melpradhanam*. *Naadi* in K0 indicated any infection/fever or any chronic diseases in which *Vatha Naadi* moves towards *Kabam* and V0 indicated the increased *Vatham* as seen mostly in autoimmune diseases, hemiplegia and in all chronic *Vatha* diseases. One pendulous *Naadi* was observed starting from the K1 region and ending up in V3 which indicated as severe form of *Vatha* disease like ankylosing spondylosis with restricted movements of the body. String like *Naadi* pattern was observed in all the regions in anaemic patients.

12.CONCLUSION

It is concluded from this study that *Naadi* examination has been found to be a very effective tool in the detection of the disease affected region of the body with reasonable accuracy. Also some of the commoner diseases could be picked up with fair percentage of sensitivity, has been proved that *Naadi* examination could be a cost effective and useful tool in the early diagnosis of diseases. Finding out the serious illness in its infantile level itself eases the recuperation and thus saves the life. *Naadi* can pick up the derangement of the three humours, physical locations of that derangement, and thus can also be used as an indicator of prognosis and so it is advisable to use *Naadi* as a primary screening and assessment tool.

This *Naadi* or *Siddha* pulse examination has been found to be an effective diagnostic and prognostic tool and hence it can be subjected to a further larger study with more controlled study sample to confirm the leads obtained from this study. Once confirmed, these findings can be generalized and applied to the population at large with more and more personnel are inducted and trained in the skill of *Naadi* diagnosis.

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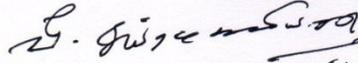
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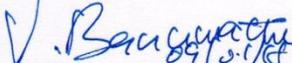
CERTIFICATE

Address of Ethics Committee: National Institute of Siddha, Tambaram Sanatorium, Chennai-600047, Tamil Nadu, India	
Principal Investigator: Dr.E.R.Sreeraj, M.D(S) – II year, Department of Noi Naadal - Dissertation –	
Protocol title: Evaluation of “NAADI PERCEPTION” in the diagnosis of regional pathological conditions.	
Documents filed	1) Protocol, 2) Data Collection forms 3) Patient Information Sheet 4) Consent form 5) SAE(Pharmacovigilance)
Clinical trial Protocol (others – Specify)	Yes
Informed consent documents	Yes
Any other documents	-
Date of IEC approval & its number	NIS/13-IEC/2017-1-24/ 22-11-2017

We approve the trial to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study, Review periodically, any SAE occurring in the course of the study, any changes in the protocol and submission of final report


Chairman


Member Secretary





Ministry of AYUSH

NATIONAL INSTITUTE OF SIDDHA

Ministry of AYUSH, Government of India
Tambaram Sanatorium, Chennai - 600 047.



WORKSHOP ON RESEARCH METHODOLOGY & BIostatISTICS

This is to certify that

Dr.
S.R.EE.RAJI. E.R......

has participated in the above Workshop held from 16.04.2018 to 20.04.2018 conducted by the

Dept. of Noi Naadal, at National Institute of Siddha, Tambaram Sanatorium, Chennai-600 047.

Dr. G.J. Christian
Coordinator
HoD, Dept. of Noi Naadal,
National Institute of Siddha

V. V. Banumathin
Prof. Dr. V. Banumathi
Director,
National Institute of Siddha
Chennai - 600 047.

CERTIFICATE



Clinical Trial Details (PDF Generation Date :- Wed, 10 Jul 2019 17:06:50 GMT)

CTRI Number	CTRI/2018/05/013604 [Registered on: 02/05/2018] - Trial Registered Prospectively	
Last Modified On	23/04/2018	
Post Graduate Thesis	Yes	
Type of Trial	Observational	
Type of Study	Cross Sectional Study	
Study Design	Other	
Public Title of Study	Diagnosis of diseases by reading naadi	
Scientific Title of Study	Evaluation of naadi perception in the diagnosis of regional pathological conditions	
Secondary IDs if Any	Secondary ID	Identifier
	NIL	NIL
Details of Principal Investigator or overall Trial Coordinator (multi-center study)	Details of Principal Investigator	
	Name	Dr Sreeraj E R
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Source of Monetary or Material Support	Source of Monetary or Material Support			
	> National institute of siddha Tambaram sanatorium			
Primary Sponsor	Primary Sponsor Details			
	Name	Ayothidoss pandithar hospital		
	Address	National institute of siddha Tambaram sanatorium Chennai 600047		
	Type of Sponsor	Research institution and hospital		
Details of Secondary Sponsor	Name	Address		
	NIL	NIL		
Countries of Recruitment	List of Countries			
	India			
Sites of Study	Name of Principal Investigator	Name of Site	Site Address	Phone/Fax/Email
	Dr Sreeraj E R	Ayothidoss pandithar hospital	Department of Noinaadal National institute of siddha Tambaram sanatorium Chennai 600047 Kancheepuram TAMIL NADU	9447929907 sreerajer@gmail.com
Details of Ethics Committee	Name of Committee	Approval Status	Date of Approval	Is Independent Ethics Committee?
	Institutional ethics committee	Approved	22/11/2017	No
Regulatory Clearance Status from DCGI	Status		Date	
	Not Applicable		No Date Specified	
Health Condition / Problems Studied	Health Type		Condition	
	Patients		Not specific	
Intervention / Comparator Agent	Type	Name	Details	
	Intervention	NIL	NIL	
Inclusion Criteria	Inclusion Criteria			
	Age From	15.00 Year(s)		
	Age To	80.00 Year(s)		
	Gender	Both		
	Details	Age 15-80 years Both male and female		
Exclusion Criteria	Exclusion Criteria			
	Details	Age below 15 years Age above 80 years Persons wet in rain Persons with fractured hands Persons under the influence of intoxicants and narcotics		
Method of Generating Random Sequence	Not Applicable			
Method of Concealment	Not Applicable			



Blinding/Masking	Investigator Blinded	
Primary Outcome	Outcome	Timepoints
	Finding out the specific affected area of human body through naadi examination	Not applicable
Secondary Outcome	Outcome	Timepoints
	Observation and documentation of the different patterns of the naadi findings obtained due to regional pathology	Not applicable
Target Sample Size	Total Sample Size=500 Sample Size from India=500 Final Enrollment numbers achieved (Total)=Applicable only for Completed/Terminated trials Final Enrollment numbers achieved (India)=Applicable only for Completed/Terminated trials	
Phase of Trial	N/A	
Date of First Enrollment (India)	16/05/2018	
Date of First Enrollment (Global)	No Date Specified	
Estimated Duration of Trial	Years=1 Months=6 Days=0	
Recruitment Status of Trial (Global)	Not Applicable	
Recruitment Status of Trial (India)	Not Yet Recruiting	
Publication Details	Not yet	
Brief Summary	<p>It is a single blind observational type of study to carry out a blinded examinations of naadi and to determine pathological conditions of particular regions of the body. Then to find out any specific character in naadi which may provide a clue to the diagnosis of any specific organ pathology, prognosis and complication of that pathological condition. The informed consent of the patient will be obtained by the trial monitor before the participant would be presented to the principal investigator and thus the meeting of the participant with the principal investigator prior to the naadi appraisal will be avoided. Patients with different ailments will be presented to the principal investigator without revealing the patient's identity, nature of ailments and other details. Patients will be subjected for naadi examination, then the principal investigator will go for a thorough checking in order to find out any specific character of naadi which may provide a clue to the diagnosis of any specific organ pathology. The principal investigator will record the examined naadi of the patient and find out the problem and region involved and will note it down on a loose sheet which will be handed over to the research team by him immediately. The data will be processed by the research team which includes the senior research officer, national institute of siddha.</p>	

14. ANNEXURE

**EVALUATION OF NAADI PERCEPTION IN THE DIAGNOSIS OF REGIONAL
PATHOLOGICAL CONDITIONS**

FORM I - SCREENING AND SELECTION PROFORMA

1. O.P.No _____ 2. I.P No _____ 3. Bed No: _____ 4. S.No: _____
5. Name: _____ 6. Age (years): 7. Gender: M F
8. Occupation: _____ 9. Income: _____
10. Address : _____

11. Contact No : -----
12. E-mail : -----

INCLUSION CRITERIA

- | | Yes | No |
|----------------------------------|--------------------------|--------------------------|
| 1. Age 15-80 years | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Male <input type="checkbox"/> | | |
| Female <input type="checkbox"/> | | |

EXCLUSION CRITERIA

- | | Yes | No |
|---|--------------------------|--------------------------|
| 1. Age below 15 years | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Persons wet in rain | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Persons with fractured hands | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Persons under the influence of intoxicants and narcotics | <input type="checkbox"/> | <input type="checkbox"/> |

Date

P.G Student

Faculty

**EVALUATION OF NAADI PERCEPTION IN THE DIAGNOSIS OF REGIONAL
PATHOLOGICAL CONDITIONS**

FORM II - HISTORY PROFORMA

1. Sl.No of the case: _____

2. Name: _____ Height: _____ cms Weight: _____ Kg

3. Age (years): _____ DOB

--	--

--	--

--	--	--	--

Date Month Year

4. Educational Status:

1) Illiterate 2) Literate 3) Student 4) Graduate/Postgraduate

5. Nature of work:

1) Sedentary work

2) Field work with physical labour

3) Field work Executive

6. Complaints and Duration:

7. History of present illness:

8. History of illness:

	Yes	No
Systemic hypertension	<input type="checkbox"/>	<input type="checkbox"/>
Ischemic heart disease	<input type="checkbox"/>	<input type="checkbox"/>

Hepatitis B and C	<input type="checkbox"/>	<input type="checkbox"/>
Diabetes mellitus	<input type="checkbox"/>	<input type="checkbox"/>
Bronchial asthma	<input type="checkbox"/>	<input type="checkbox"/>

9. Past History:

Any drug allergy	<input type="checkbox"/>	<input type="checkbox"/>
Any surgeries	<input type="checkbox"/>	<input type="checkbox"/>
Any major illnesses	<input type="checkbox"/>	<input type="checkbox"/>

10. Habits:

	Yes	No	Amount/day
Smoker	<input type="checkbox"/>	<input type="checkbox"/>	_____
Alcoholic	<input type="checkbox"/>	<input type="checkbox"/>	_____
Drug Addiction	<input type="checkbox"/>	<input type="checkbox"/>	_____
Betel nut chewer:	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tea	<input type="checkbox"/>	<input type="checkbox"/>	_____
Coffee	<input type="checkbox"/>	<input type="checkbox"/>	_____
Milk	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tobacco and Pan chewing	<input type="checkbox"/>	<input type="checkbox"/>	_____

11. Diet history

Vegetarian	<input type="checkbox"/>
Non Vegetarian	<input type="checkbox"/>

12. Personal history:

Marital status: Married Unmarried

No. of children: Male: _____ Female: _____

Ordinal status among the siblings:

Hobbies:

Socio economic status:

13. Family history:

14. Menstrual & Obstetric history:

Age at menarche _____ years

Gravidity Parity

Duration of the menstrual cycle:

Constancy of cycle duration: 1.Regular 2.Irregular

15. Occupational history:

16. Noi utra kalaam

1. Kaarkaalam 2.Koothirkaalam
(Aug15-Oct14) (Oct15-Dec14)

3. Munpanikaalam 4.Pinpanikaalam
(Dec15-Feb14) (Feb15-Apr14)

5. Ilavenirkaalam 6.Muthuvenirkaalam
(Apr15-June14) (June15-Aug14)

17. Noi utra nilam

1. Kurunji 2. Mullai 3. Marutham
(Hilly terrain) (Forest range) (Plains)

4. Neithal 5. Paalai
(Coastal belt) (Desert)

Date:

P.G Student

Faculty

**EVALUATION OF NAADI PERCEPTION IN THE DIAGNOSIS OF REGIONAL
PATHOLOGICAL CONDITIONS**

FORM III - CLINICAL ASSESSMENT

1. Serial No: _____

2. Name: _____

3. Date of birth: Date Month Year

4. Age: _____ years

5. Date: _____

NAADI (RADIAL PULSE READING)

(a) Naadi Nithanam (Pulse Appraisal)

1. Kaalam (Pulse reading season)

- | | | | |
|-------------------------------------|--------------------------|--------------------------------------|--------------------------|
| 1. Kaarkaalam
(Rainy season) | <input type="checkbox"/> | 2. Koothirkaalam
(Autumn) | <input type="checkbox"/> |
| 3. Munpanikaalam
(Early winter) | <input type="checkbox"/> | 4. Pinpanikaalam
(Late winter) | <input type="checkbox"/> |
| 5. Ilavenirkaalam
(Early summer) | <input type="checkbox"/> | 6. Muthuvenirkaalam
(Late summer) | <input type="checkbox"/> |

2. Desam (Climate of the patient's habitat)

- | | | | |
|-------------------|--------------------------|-------------------|--------------------------|
| 1. Veppam kuraivu | <input type="checkbox"/> | 2. Veppam miguthi | <input type="checkbox"/> |
|-------------------|--------------------------|-------------------|--------------------------|

3. Vayathu (Age)

- | | | | | | |
|----------------|--------------------------|---------------|--------------------------|----------------|--------------------------|
| 1) 1 - 33years | <input type="checkbox"/> | 2) 34-66years | <input type="checkbox"/> | 3) 67-100years | <input type="checkbox"/> |
|----------------|--------------------------|---------------|--------------------------|----------------|--------------------------|

4. Panbu (Nature)

- | | | | | | |
|------------------------------|--------------------------|-------------------------------|--------------------------|---------------------------|--------------------------|
| 1. Thannadai
(Playing in) | <input type="checkbox"/> | 2. Puranadai
(Playing out) | <input type="checkbox"/> | 3. Illaitthal
(Feeble) | <input type="checkbox"/> |
|------------------------------|--------------------------|-------------------------------|--------------------------|---------------------------|--------------------------|

- | | | | | | |
|-----------------------------|--------------------------|-----------------------------|--------------------------|-------------------------------|--------------------------|
| 4. Kathithal
(Swelling) | <input type="checkbox"/> | 5. Kuthithal
(Jumping) | <input type="checkbox"/> | 6. Thullal
(Frisking) | <input type="checkbox"/> |
| 7. Azhutthal
(Ducking) | <input type="checkbox"/> | 8. Padutthal
(Lying) | <input type="checkbox"/> | 9. Kalatthal
(Blending) | <input type="checkbox"/> |
| 10. Munnokku
(Advancing) | <input type="checkbox"/> | 11. Pinnokku
(Flinching) | <input type="checkbox"/> | 12. Pakkammokku
(swerving) | <input type="checkbox"/> |
| 13. Suzhalal
(Revolving) | <input type="checkbox"/> | | | | |

(b) Naadi nadai (Nature of Pulse)

- | | | | | | |
|---------------|--------------------------|----------------|--------------------------|---------------|--------------------------|
| 1. Vali | <input type="checkbox"/> | 2. Azhal | <input type="checkbox"/> | 3. Iyyam | <input type="checkbox"/> |
| 4. Vali Azhal | <input type="checkbox"/> | 5. Azhal Vali | <input type="checkbox"/> | 6. Iyya Vali | <input type="checkbox"/> |
| 7. Vali Iyyam | <input type="checkbox"/> | 8. Azhal Iyyam | <input type="checkbox"/> | 9. Iyya Azhal | <input type="checkbox"/> |

Time: _____ AM/PM

Date:

Patient Position during pulse examination:

Dheghi:

Locations Of Naadi:

1. VATHAM (Index finger)

Right hand:

Upper(medial part) V1	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Middle(Middle part) V2	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Lower(Lateral part) V3	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	

Left hand:

Upper(medial part) V1	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Middle(Middle part) V2	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Lower(Lateral part) V3	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	

2. PITHAM (Middle finger)

Right hand:

Upper(medial part) P1	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Middle(Middle part) P2	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Lower(Lateral part) P3	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	

Left hand

Upper(medial part) P1	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Middle(Middle part) P2	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Lower(Lateral part) P3	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	

3. KABHAM (Ring finger)

Right hand

Upper(medial part) K1	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Middle(Middle part) K2	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Lower(Lateral part) K3	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	

Left hand

Upper(medial part) K1	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Middle(Middle part) K2	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Lower(Lateral part) K3	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	

1. Anterior,Posterior And In Between Vatham, Pitham, Kabham(V,P,K)

Right hand

Anterior to Vatham V0				
In between Vatham&Pitham VP	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
In between Pitham &Kabham PK	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Posterior to Kabham K0				

Left hand

Anterior to Vatham V0				
In between Vatham&Pitham VP	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
In between Pitham &Kabham PK	Soorya pradhanam(S)		Mel pradhanam(M)	
	Naduvidam(Nv)		Nadu pradhanam(Np)	
	Chandrapradhanam(C)		Keezh pradhanam(K)	
Posterior to Kabham K0				

Any special Naadi:

Left hand:

Right hand:

Affected region:

Vatham

Pitham

Kabham

Interpretations:

Date :

P.G Student

Faculty

**EVALUATION OF NAADI PERCEPTION IN THE DIAGNOSIS OF
REGIONAL PATHOLOGICAL CONDITIONS**

FORM IV - INFORMED WRITTEN CONSENT FORM

Iexercising my free power of choice, hereby give my consent to be included as a subject in the diagnostic trial entitled "EVALUATION OF NAADI PERCEPTION IN THE DIAGNOSIS OF REGIONAL PATHOLOGICAL CONDITIONS". I may be asked to give urine and blood samples during the study.

I have been informed about the study to my satisfaction by the attending investigator about the purpose of this trail, the nature of study and the laboratory investigations. I also give my consent to publish my study results in scientific conferences and reputed scientific journals for the betterment of clinical research.

I am also aware of my right to opt out of the trail at any time during the course of the trial without having to give the reasons for doing so.

Signature /thumb impression of the patient :

Name of the patient :

Date :

Signature of the investigator :

Head of the Department :

Date :

“ நோய்களை நாடி மூலம் கணிப்பதற்கான மருத்துவ ஆய்வு”

ஒப்புதல் படிவம்

ஆய்வாளரால் சான்றளிக்கப்பட்டது

நான் இந்த ஆய்வை குறித்த அனைத்து விபரங்களையும் நோயாளிக்கு புரியும் வகையில் எடுத்துரைத்தேன் என உறுதியளிக்கிறேன்.

தேதி : கையொப்பம்:
இடம்: பெயர் :

நோயாளியின் ஒப்புதல்

நான் _____ என்னுடைய சுதந்திரமாக தேர்வு செய்யும் உரிமையைக் கொண்டு இங்கு தலைப்பிடப்பட்ட “நோய்களை நாடி மூலம் கணிப்பதற்கான மருத்துவ ஆய்விற்கு ” என்னை உட்படுத்த ஒப்புதல் அளிக்கிறேன்.

என்னிடம் இந்த மருத்துவ ஆய்வின் காரணத்தைப் பற்றி திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

இந்த ஆய்வின் போது எடுக்கப்படும் புகைப்படங்கள் மருத்துவ அரிவியலின் முன்னேற்றத்தி ற்காகமட்டும் பயன்படுத்தப்படும் என்று ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.\

நான் இந்த மருத்துவ ஆய்வின் போது காரணம் எதுவும் கூறாமல் எப்பொழுது வேண்டுமானாலும் இந்த ஆய்விலிருந்து என்னை விடுவித்து கொள்ளும் உரிமையை தெரிந்திருக்கின்றேன்.

தேதி: நோயாளியின் கையொப்பம்:
இடம்: பெயர்:

தேதி: சாட்சிக்காரர் கையொப்பம்:
இடம்: பெயர்:

உறவுமுறை:

**EVALUATION OF NAADI PERCEPTION IN THE DIAGNOSIS OF
REGIONAL PATHOLOGICAL CONDITIONS**

FORM V - PATIENT INFORMATION SHEET

PURPOSE OF RESEARCH AND BENEFITS:

The diagnostic research study in which your participation is proposed to assess efficacy of Naadi examinations in patients to diagnose different diseases. Knowledge gained from this study would be of benefit to patients suffering from different ailments for the diagnosis and prognosis.

STUDY PROCEDURE:

You will be interviewed and examined as OP and IP patients at the study centre. At the first visit the physician will conduct a brief physical examination and assess the condition followed by Envagai thervu examination. After matching the inclusion criteria you will be included in this study and you will be examined on the basis of Envagai thervu.

CONFIDENTIALITY:

Your medical records will be treated with confidentiality and will be revealed only to other doctors / scientists. The results of this study may be published in a scientific journal, but you will not be identified by your name.

YOUR PARTICIPATION AND YOUR RIGHTS:

Your participation in this study is voluntary and you may be withdrawn from this study anytime without having to give reasons for the same. You will be informed about the findings that occur during the study. If you do agree to take part in this study, your health record will need to be made available to the investigators. If you don't wish to participate at any stage, the level of care you receive will in no way be affected.

The Ethics committee cleared the study for undertaking at OPD and IPD, NIS. Should any question arise with regards to this study you contact following person.

P.G student:

Dr.E.R.Sreeraj

Department of Noi Naadal

National Institute of Siddha

Chennai - 600 047.

9447929907

” நோய்களை நாடி மூலம் கணிப்பதற்கான மருத்துவ ஆய்வு

ஆய்வின் நோக்கமும் பயனும்;

தாங்கள் பங்கேற்கும் இவ்வாய்வு “நோய்களை நாடி மூலம் கணிப்பதற்கான மருத்துவ ஆய்வு ” சித்த மருத்துவ முறையில் நோயை கணிப்பதற்கான ஒர் ஆய்வு முறை. இவ்வாய்வு தாங்களின் நோய்கணிப்பை பற்றியும் நோயின் போக்கை பற்றியும் அறிய உதவும்.

ஆய்வு முறை:

தாங்கள் நேர்காணல் மற்றும் பரிசோதனைகளின் மூலம் உள்நோயாளி வெளி நோயாளி பிரிவில் ஆய்வு செய்யப்படுவீர்கள். முதல் நேர்காணலின்போது ஆய்வாளரால் உடல் பரிசோதனை செய்து குறிப்பிட்ட குறிகுணங்கள் இருப்பின் இவ்வாய்விற்காக எடுத்துக்கொள்ளப்படுவீர்கள்.

மந்தணம்:

தங்களின் மருத்துவ ஆய்வணங்கள் அனைத்தும் மருத்துவர் , ஆய்வாளர் அல்லாத பிறரிடம் தெரிவிக்கப்படமாட்டாது.

நோயாளியின் பங்களிப்பும் உரிமைகளும்:

இவ்வாய்வில் தங்களின் பங்கேற்பு தன்னிச்சையானது . இவ்வாய்வில்தாங்கள் ஒத்துழைக்க இயலவில்லையெனில் எப்பொழுது வேண்டுமானாலும் காரணம் எதுவும் கூறாமல் விலகிக்கொள்ளலாம் . இவ்வாய்வின்போது அறியப்படும் தகவல்கள் தங்களுக்கு தெரிவிக்கப்படும் . நோயாளியின் ஒப்புதலுக்குணங்க நோய்கணிப்பு விவரங்களை ஆய்வாளர் பயன்படுத்திக்கொள்வார். நோயாளி ஆய்வினிடையே ஒத்துழைக்க மறுத்தாலும் எந்த நிலையிலும் நோயாளியை கவனிக்கும் விதம் பாதிக்கப்பட மாட்டாது . நிறுவன நெறிமுறை குழுமம் (Institutional Ethical Committee) மேற்கண்ட ஆய்வினை மேற்கொள்ள ஒப்புதல் அளித்துள்ளது.

ஆய்வு குறித்த சந்தேகங்கள் இருப்பின் கீழ்க்கண்ட நபரை தொடர்பு கொள்ளவும்.

மரு:ஸ்ரீராஜ்.இ.ரா

நோய் நாடல் துறை

தேசிய சித்தமருத்துவ நிறுவனம், சென்னை-47, 9447929907