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Ckdu in uddanam region : A study on the dialemmas and adjustments

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A study on the dialemmas and adjustments pertaining to ckdu, in uddanam region: What is ckdu ?: ckdu is the general term for damage that reduces function of the kidney.
Chronic kidney disease (ckd) occurs when kidneys are no longer able to clean toxins and waste products from the blood and perform their functions to full capacity this happen all of a sudden or over time. The chronic kidney disease also known as chronic renal disease is an umbrella term for several conditions that affect kidneys and generally is a progress loss in reanl function of kidneys that lasts longer than three months is called chronic kidney disease. Often , chronic kidney disease of unknown etiology ckdu (has been used for these nephropathies since the early 2000s, as the etiooligy of thses nephropathies is not clear. Uddanam endemic nephropathy , compared to other nephropathies of unknown etiology is the least understood and the least pubclicized.
2. The prevalence of ckdu, in certain regions of the world ;, Africa AP, uddanam.
Chronic kidney disease has become an alarming health cocern in the turn of 21st century in certain geographies across the globe. Studies reveal that chronic kidney disease of unknown etiology (ckdu) is highly prevalent among the agricultural communities . predominantly among the male farm workers in central America . ezypt , India and srilanka in recent years. Recognising the gravity of the public health threat caused by ckdu in 2010, the ministry of health srilanka , in collaboration with…….
3. socio-polotical context :
As it is a slow killer disease , thepeople who diagnosed with chronic kidney disease are looked upon as potential invalids as it is slow killer disease. Any member of the family of the ckdu patient , even if they are sick for a unknown cause are considered as potential kidney patient.
Families of kidney patients have to come to terms with the prolonged treatment and providing assistance to the patient.they have to put up with loss of livelihoods , escalation in health expenditure challenges in marital relations. Difficulty In getting marital alliances their children , stressful and stigmatized lives .
4. political context: although news about the case of kidney diseases in uddanam region became a cause of concerns among the people ,political interventions cause In only during 2012, when k.yerrannaidu,the then member of parliament from Srikakulam under whose constituency uddnam region falls , brought in few initiatives A water purification plant was inaugurated by the then chief minister of Andhra Pradesh state.,Nara Chandra babu naidu near uddanam when telugu desam party (TDP) was in rule. After yerran naidu ‘s death , his son K. Ram mohan naidu got elected as a member of parliament in 2014. Even though there is a wide spread of news in the media , it is informed that barring few measures , not much has been done substanstially in mitigating uddanam nephrology until 2017.
In the month of January 2017, pawan kalyan , a telugu movie star-turned politician and politician and the president of jana sena party (jsp) launched an agitation in uddanam region against the indifference of the government about ckdu. Communist parties such as communist party of india (Marxist) , its state secretary p.madhu and communist party state secretary , k. Ramakrishna extended their support topawan kalyan .They were critical of the central government froits failure to allocate funds and the state government fro its apathy . various social organizations extended their solidarity with the agitation and sought the ruling tkeugu desam party fro a response within 48 hours on the high prevalence of kidney diseases in the uddanam region by launched a hunger strike.

MEDICAL RESPONSE;
Both state and central governments responded by sending medical teams to make studies o uddnam kidney disease . mediacl screening of 1, 01, 593 villagers in uddanam area was initiated by government of andhrapradesh in 2017. This survey found that as much as ichhapuram , kavtiti, sompeta ,palasa , mandasa, vajrapukotturu and miliaputti . During the medical screening and the medical and health department officials identified 13, 093 new cases.
In febraury 2017, a team consisits of Dr. Sanjay Agarwal, head of the department nephrology , RML hospital new delhi , Dr jay karan, deputy director, national centre disease control , new delhi and Dr. Anuradha medoju ,Regional director for health and family welfare , government of india , Hyderabad visited uddanam regioan . during February 2017 and July 2018, inidan council of medical research (icmr) team visited the uddanam area . in partner ship with government of andhrapradesh a scheme “ for root causing the etiology of high incidence of ckdu,” in uddanam. Ara has been launched.
A high level review meeting ws held at the secretariat of the andhrapradesh chief minister sri nara Chandrababu naidu on June 9th 2018 to operationalize preventive approaches fro chronic kidney disease of unknown aetiology. The state government took up campaign to prevent new cases with an advice to change their food ahbits and consume purified driniking water. The officials are directd to instil confidence among the patients.
Meanwhile pawan kalyan mobilised contacts at united states of America and harward university medical team undertook at project, screening and early evaluation of kidney diseases(SEEK). Survey was conducted a fourteen across the country

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to find out the severity of kidney disease. It collected six and a half thousand blood samples , developed an eight – page questionnaire quiestionnaire to learn about food habits,weather conditions, illness etc.after analysing everything , a report was prepared on the severity of the disease.

In 2017 , advocate k.simhachalam had moved the high court of andhrapradesh with apublice interest litigation seeking directions to the state government regrding management of kidney disease . The high court directed the government to submit the details pertaining to the measures being taken to address the issue and expediate ameliorative measures.

The project "STOP CKDU" a study established to understand the disease burden , natural history , aetiology , and health economic consequences of high incidence of chronic kidney disease of uncertain etiology (ckdu) , and make suitable interventions fro general improvement of hea;lth conditions in the area of high incidence of chronic kidney disease of uncertain etiology (ckdU) and make suitable interventions fro general improvement of health conditions in the area of high incidence in Andhrapradesh has been initiated . A committee consisting of Dr. Poonam mlakondaiah , principal secretary, ministry of health and family welfare department , government of andhrapradesh, dr jitendar sharam , advisor to the ministry of health and welfare , dr aruna kumar , director , health and family welfare , dr. arun kumar , director , health and family welfare anhrapradesh, dr. vivekhananda jha , executive director, goerge institute fro global health , india and dr. Balaji gummidi, senior project manger (TGI), india have been entrusted the task of initiating research activities and levaraging the government led to service delivery activities to gain confidence in the public. Action programmes include training of medical officers and hospital superintendts on identification , diagnosis , investigation and management of ckdu using tools developed by international society of nephrology . officials were asked to ensure that mineral drinking water is provided tompeople in areas by the disease. Under national health mission (NHM) support for Pradhan mantri national dialysis programme (PMNDP) is provided to state. Ichapuram member of legislative assembly ,bendalam ashok expressed that although test for kidney disease have increased and basic medicines are made available free of cost, patients stay away from government help . they shy away from travelling to test centres in mandal headquarters and seek traditional healers.

A new government was fromed in 2019 and chief minister y.s jagan mohan reddy initiated a slew of measures.A kidney kidney research centre in Srikakulam district is granted to find conclusive reasons fro the spread of kidney diseases . it would be headed by an additional director rank official in the mediacl and health department with a civil surgeon , an administrative officer and two senior assisitant posts are sanctioned .The government announced that urologists , vascular surgeons , general physicians , genral surgeon, anaesthetist , radiologist, paathologost, microbiologist, and general duty medical officers would be appointed on contractual basis. Hospital staff including nursestechnicians, deivers , and clerical staff would be taken on out sourcing basis.

Government sources declared the following details about ckdu in the uddanam area till 2019.
Patients with kidney disorder: above 40,000 cases.
Dialysis patients- upto 3,500 people,
Disease severity zones -12 mandals.
Most affected villages : 177
Dialysis centres: 7(kaviti, sompeta, haripuram, palasa, tekkali, palakonda, Srikakulam,)

Many observers opine that covid -19 diverted the attention of public health efforts and even after the pandemic the attention towards tackling ckdu situation has not picked up . in march , 2022 the then minister fro medical and health , alla krishna Srinivas told the assembly on Wednesday the government has setup seven dialysis centres with 65 units fro chronic kidney parients . the present minister health , dr seediri appalaraju whonus medical doctor fro the uddanam area mentioned that experts have indicated that diabetes , hypertension, irregular , and frequent usage of non steroidal , anti - infammatory drugs and increased concentration of metals like silica , fluoride and phthalates in ground water as plausible reasons behind the increase of such cases. The state government has launched work on drinking scheme at a cost of 700 crore to provide potable water in uddanam . with regard to the screening tests , the minister explained thet screening fro non -communicable diseases in this region have been carried out , he said out of 8.74 lakhs screened . 78, 489 people are found to have suspected hypertension and 75,000had diabetes . the medica and health minister officially acknowledged that 70% of the total kidney ailments in trhe state of Andhra Pradesh came from the uddanam region . although dialysis management and pension distribution are some of the relief measure taken by the state government , many express thet the poor stay away from medical care due to the lack of opportunities to conduct full scale exmintaion in primary health centres and community health centres and lack of free medicines.

Treatment Regimen:

Treatment 1:

Chills and shivers are believed to occur due to evil eye and are referred to as *disti tagilindi*. Elderly women or *dasari* takes broom and swipe it from face to feet of the patient two to three times and split saliva on it while chanting some spells such as *vuru disti, vada disti, irugu disti, porugu disti, naa disti nee disti, seeda disti, paadu disti, po.po… na manisini vadili yellipo*, meaning evil eyes of the villagers, people of the street, of the neighbors, my evil eye or yours, of the insects and pests…go away, leave this person. Few burnt red chilies and a small amount of sea salt are taken in the righthand and turned around the face of the patient for three times and thrown into the fire of the hearth. Turmaric water in a small tumbler, *chembu* are sprinkled on the body of the patient and the remaining water is thrown out of the house. Then they feel that the *cheeda* has left them and the disease will be cured. This process is also known as *digadudupu*. If

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symptoms worsen and the diseased person may get the pain, burning or streaks of blood while passing urine, they think that *chethabadi* or *sillangi* has been done to against him for which the *dasari* of the village is consulted for the remedy.

Treatment 2:
When the symptoms of kidney disease show fevers associated with pain while passing urine etc., and continue after primary cultural practices like *digadudupu* they approaches local doctors who give native medicine. Generally known as ayurvedic doctors but they are not trained in any type of medical system but learned curative practices from their forefathers. When approached, the ayurveda doctor visits the patients' home and gives the medicine which is also known as *naatu mandu,* traditional medicine or *mulika vydyam,* herbal medicine or *pasaru mandu,* leaf-juice medicine. For the relief of difficulty in passing urine, the medicine is prepared with the mixture of garlic, *paashaana bedhi aaku* or kondapindi leaves, *vulavalu*, horse gram, roots of *cheepuru chettu,* broom stick with the honey. As per the ayurvedic doctor, this potion will provide relief from the difficulties in passage of urine. Some ayurvedic doctors prescribe *kashaayam*, a decoction of *miriyaalu*, pepper and *jeelakarra*, jeera. For some patients, the medicine prescribed is *pasupu,* turmeric mixed with *taravaani*, fermented rice gruel. The people believe that these concoctions helps in improving the digestion. In their perception good digestion leads to reduction in the body temperature. CKDu patients express that indigestion, difficulties in passing urine and fever are common in kidney disease.

Treatment 3:
CKDu patients also consult *bhoota vaidyulu*, local healers who drive away evil spirits, available in their area. The healer fixes an auspicious day and time and the patient should reach the healer's place taking bath while in fasting. Then the healer makes the patient to sit before *muggu*, a pattern made out of chalk powder. He puts the colours of black, white and red using vermillion, chalk and charcoal. Prior to that the patient has to carry items such as a black hen, an earthen pot consisting of small mirror, black bangles, small head of scare crow, *nalla poosalu,* small black beads, *kaatuka,* eye liner and a black saree. The healer performs puja with these items while chanting some mantras. He places as a small heap before the goddess with 100grams each of *pesara pappu,* green gram, *kandulu*, red gram, *minumulu*, black gram and *jinugulu,* bengal gram. He keeps all the items such as the pot, the hen, lentils etc,. near the *muggu*. Then he will take the black hen holding its neck and moves it on the sick person from forehead to toes for three times, chanting the mantras. The hen dies after showing it to the sick person and the healer asks the persons accompanying the patient to carry the dead hen and throw it at the outskirts of the village or lake or sea whichever lies on the boundary. The person who carries the dead hen should not look back after throwing it away. This entire process take place for one hour. The clients believe that the healer transferred the evil spirit which is troubling the patient to the black hen and as the hen dies, the patient's illness will be cured.

Treatment 4:
Some people approach *maatrala vaidyudu* , tablet doctor or *sanchi doctor,* handbag doctor or quack doctors who treat patients with tablets and injections. They are also known as RMP (Registered Medical Practitioners) doctors but many of them do not possess any certification. In Uddanam area these *maatrala vaidyudu* play an important role in treating the kidney patients. When the person reaches the acute phase, fever and body pains are common symptoms. These quack doctors give pain killers and NSAIDS to the persons. If the person is suffering from difficulty in urination, they are given AV injection to facilitate free flow of urine. These quack doctors also act as agents to private doctors in the towns.

Treatment 5:
People also go to alternative healthcare providers such as homeopathy doctors who are available in their villages or neighboring places. These homeopathy doctors are freelancers and neither trained nor registered with the government. They learnt on their own by reading books or follow their relatives. General patients including CKDu cases go to them to get relief from their unknown symptoms. It is informed that the condition of CKDu patients may worsen as homeopathic treatment claims to be holistic and does not deal with disease. These homeo practitioners refer the CKDu patients to private allopathic hospitals at advanced stage of the disease.

Healing Practices among Fishing Communities:
It is observed that more than a quarter of the CKDu patients in Uddanam area belong to the fishing communities such as Bestha, Jalari, Vadabalija and Palli. Referring themselves with the sanskritised name, Agnikula kshatriya, these fishing communities have their distinct healing practices and at the same time follow some of the ways of other communities. Therefore, it becomes more relevant to look into the role of religion, healers, specific ways of diagnosis and healing practices, which are more or less similar among the fishing communities of Uddanam region.

The life of fishing societies is rich in ritual activities and their religious institutions are closely connected with their habitat and important features of their social organization. Fishing communities mostly worship goddesses which are considered as the lower order of Hinduism but some households embraced Christianity later on. They mostly believe in Gangammathalli, a female deity as the embodiment of sea and she is worshipped in different forms and names. Though the religious life of fishing communities is dominated by the local village and lineage deities, they propitiate occasionally

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gods of the great tradition Hinduism such as Rama, Krishna, Venkateswara, Ganesh, Hanuman etc,. Fishing communities call their female deities as *ammoru*, the mother goddesses, in whom their lives are closely related. At the community level, fishing societies have village deities who are called *grama ammorlu* or *peddammorlu* while the deities associated to a particular lineage group are generally called *inti ammorlu*.

Each female deity is considered to be special for protection of their community and their habitation. It is their belief that goddess Polamma protects fishermen from fever, Nookalamma protects the fishing community from small pox and Peddammavaru prevents the boats being capsized or damaged. All the fishing communities believe that these deities protect them from evils, epidemics and from natural disasters such as storms and tidal waves. Basing on the local descent group organization, other female deities who belongs to the lineages of the village are propitiated and worshipped, and are closely related with their economic organization.

The goddesses are categorized as village level goddesses and household level goddess. Pollamma, Nookalamma, Asiriamma, Yellamma, Amoruamma, Donkiramma, Pydithlliamma, Gangamma, Majigovaramma, Muthyalamma, Maridamma and Pochamma are the major goddess and fishers worship *ammarvaru* before they go to fishing and they believe that their goddesses protect them from danger, death and gives strength to them. They believe that the household goddesses act as guardians and protect them in any natural disasters also from the evil spirits turned against the persons. These household goddesses also cause diseases and misfortunes to those persons that inflicted any damage to persons under their protection. Any person who is suffering from ill health has to necessarily verify as to which goddess caused it and seek relief from the supernatural.

Village Level Goddesses in the Four Fishing villages

Village Name	Goddesses Name	Offered Items	Specified Day
Reyyipadu	Mutyalamma	Goat, Saree, Blouse, Banana,	Tuesday
	Bangaramma	Goat, Saree, Blouse, Turmeric,	Friday
	Durgalamma	Saree, Blouse, Turmeric Saffron,	Thursday
	Asiramma	Hen, Saree, Blouse, Turmeric,	Tuesday
	Paradesamma	Hen, Saree, Blouse, Turmeric,	Friday
	Boolokamma	Hen, Saree, Blouse, Turmeric,	Saturday
	Sattammama	Piglet, Saree, Blouse, Turmeric, Saffron, Banana	Sunday
Isukapalem	Jogupolamma	Saree, Blouse, Goat, Hen	Tuesday
	Mutyalamma	Saree, Blouse, Goat, Hen	Tuesday
	Bangaramma	Saree, Blouse, Goat, Hen	Friday
	Durgamma	Saree, Blouse, Goat, Hen	Thursday
	Nookalamma	Saree, Blouse, Goat, Hen	Thursday
	Paradesamma	Saree, Blouse, Goat, Hen	Tuesday
	Boolokamma	Saree, Blouse, Goat, Hen	Saturday
	Sattamma	Saree, Blouse, Goat, Hen	Tuesday
Sariyapalli	Polamma	Saree, Blouse, Vermillion	Sunday
	Durgalamma	Saree, Blouse, Hen	Thursday
	Mogadaramma	Saree, Blouse, Turmeric	Tuesday
	Nookalamma	Saree, Blouse, Hen	Thursday
	Gangamma	Saree, Blouse, Goat, Hen	Tuesday
	Erni ammatalli	Saree, Blouse, Vermillion	Sunday
Bethalapuram	Polamma	Saree, Blouse, Turmeric, Goat/Hen	Sunday
	Durgamma	Saree, Blouse, Turmeric, Hen	Thursday
	Gatilamma	Saree, Blouse, Turmeric, Saffron	Thursday
	Mahankala	Saree, Blouse, Turmeric, Saffron	Tuesday
	Ganga Devi	Saree, Blouse, Turmeric, Goat	Tuesday
	Kottamma	Saree, Blouse, Turmeric, Saffron	Friday
	Nallamaremma	Saree, Blouse, Turmeric, Saffron	Saturday
	Nookalamma	Saree, Blouse, Turmeric, Hen	Thursday

House Hold Goddesses in the Fisher Villages

Sariyapalli	Bethalapuram	Reyyipadu	Isukapadu
Mutyalamma Thalli Bangaramma Thalli	Mutyalamma Thalli	Polamma Thalli Durgalamma Thalli Mogadarammathalli	Polamma Thalli Durgamma Thalli
Boolokamma Thalli	Bangaramma thalli		Gatilamma Thalli

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Sattamma Thalli Korlamma Thalli Kunchamma Thalli NallammaremmaThalli	Jogupolamma Thalli DurgalammaThalli Masenu DevaraThalli	Nookalamma Thalli Erniamma Thalli Korla Devara Thalli Raja rajeswariThalli Masenu Devara Dhana Sakthi Boolokamma Thalli	Ramanamma Thalli MahankalammaThalli Kotta ammoru Ganga Devi
Nookalamma Thalli	Korladevara Thalli		Jogu polamma
Paradesamma Thalli Poleramma Thalli	Sattipolamma Thalli		Nallammaremma Ellamma
Jogupolamma Thalli	Ammoramma		Pydithallmma

Religious Personnel:

Dasudu and *Bhakthudu* or *Bakthurlamma*(woman) are the two religious functionaries associated with the deities of fishing communities. *Dasudu* is the chief worshipper of village deity and serves the interests of the whole villagers. *Bhakthudu* or *Bakthuralamma* is the worshipper of lineage deity and serves the interests of that particular lineage group. *Dasudu* is a much respected and significant person in the village and known as the carrier of the goddesses. The services of the Dasudu plays a vital role in magico-religious life of villagers and are utilized in distress and for finding a solution for domestic troubles and difficulties. *Dasudu* employs a method called *chupu*, a magico-religious ritual to identify the causative phenomena and finds the solution for the troubles. It is reported that while in performing *chupu*, *dasudu* goes into trance and communicates with the deities to find out the solutions for problems. All difficulties and troubles are invariably attributed to the wrath of the deities. The villagers try to find out solution through *dasudu*. His patent solution consists of a ritual sacrifice of a fowl which is an integral part of magico-religious system to appease deities. *Dasudus* are of two types – *Amma Vaari dasudu* and *Chupu dasudu*. *Amma vaari dasudu* is the career of goddess, *ghatalu* and makes the offerings during festivals and performs rituals for the first use of net and at the sacrifice of *sesha potelu*. The *chupu dasudu* attends the activities to ascertain the causative goddess for the illness such as *naadi chudadam*, reading the pulse, *chupurayi,* and *dandaalu pettatam*, an offering for compensation at times of illness. He also attends to resolve family disputes and divorces, assisting the brahmin, *chukketagadu* and *ustapodu* at the death ceremonies.

Bakthuralamma is a designated woman, who offers prayers to the goddess and takes care of the *peddillu*, the social, economic, political and religious hub of the surname group or lineage among the fishing communities. They keep their goddess in *peddillu* which build and maintain collectively. Any occasion in a family should start by offering prayers at the *peddillu*. When a woman is considered for the selection of Bakthuralamma, they call *dasudu* on a specific day to the beach and go on fishing after the *dasudu* spells out the name of the person under consideration. If they get good catch on that day, it is an indication that the woman is favourable to serve the goddesses. Then she is taken to a temple accompanied by thirty members and *dasudu*. They carry the *taalalu*, cymbols, three *kolas* or lamp stands and offer prayers to the Ammoramma goddess. They cook *madapala panti* , a preparation made out of rice, pulses and vegetables and offer it to the ancestors. Wicks are arranged on the lamp stands and lighted. One *kola* is given to Bakthuralamma and she holds the light stand with her wet clothes on. Then the *dasudu* and other elders offer prayers to their goddess with an expectation that the goddess possess the *Bakthuralamma*. If the goddess comes on the *Bakthuralamma*, she will fall down to a side. She is lifted up by the group and they cook their lunch there, eat and return. They have to wait till the goddess possesses the *Bakthuralamma* which may take till evening. After returning to the village, *Bakthuralamma* is taken to *dibba*, a place on the beach and offer prayers. *Bakthuralamma* then is taken to peddillu and again they wait for the goddess to possess her. Thereafter *Bakthuralamma* takes up the responsibility of offering prayers to the goddess at *peddillu.* A woman who became *Bakthuralamma* cannot discontinue her duties for the goddess will not allow her and pester her in case she derelicts her duties. A *Bakthuralamma* has to be a married woman. In case the goddess chooses women who eloped with a man and begot children, she has to be given the status of married woman.

These fishing communities believe that failure of catch has something to do with the normative behaviour of the surname group. If members belonging to a *peddillu* experience low catches while other could get good returns, they feel that something went wrong either with the behaviour of men or their women that caused the ire of their goddess. This leads to verification in the *chupurayi* by *dasudu* as to which member of the family transgressed the normative behaviour of the culture that resulted in the wrath of the supernatural. After ascertaining the wrongdoer in the family, *dasudu* asks the goddess about an appropriate penalty. The punishments vary from *medalo tādu kattatam*, tying a rope around the neck, *vala karaabu cheyatam*, damaging the net or tying a piece of a net around the neck and *maddili,* tying a long stick on the shoulders and making the offender go around the village. The offender has to confess his/her folly before the goddess at *peddillu*. They believe that it is the spell of the goddess that makes the fish to get caught in the net, *valalo guchchukovatam*. They believe that goddess blurs eyes of the fish and they fall in to the net. In case the goddess is furious at them, she makes the net to flash as bulb so that the fish can escape. Then in spite of abundant fish in the sea, their children go hungry.

Traditional Curative practices in fishing communities:

Curative practices in fishing communities is generally done by divination. Divination determines the causes of and remedies for disruptions in physical health and occupational well-being. All fishing communities- Jalari, Bestha, Palli and Vadabalija believe that spirits attack neither arbitrarily choosing their victims at random, nor directly inflicting suffering

on the transgressors. Spirits select individuals who either transgressed the societal norms or young children and pregnant women that are innocent and valuable persons and therefore most vulnerable to spiritual attack. Different curative practices that enfold areas of religion and social control are employed by the fishing communities.

Nadi chudadam

When a person falls ill, the members of the family call dasudu to examine the disease. The *dasudu* picks up the patient's left hand and detect the arterial pulse, *naadi*. This is called as nadichudadam. *Dasudu* initially invokes the attack of household spirits. When all the spirits deny the responsibility, *dasudu* conclude the illness as *daktar jabbu* and advise the patient to go for medical treatment. If it is confirmed that, it is the spirit attack, then the *dasudu* initiates the spiritual treatment. Dasudu re-invokes the goddess by taking a *mudupu*, a small amount of money which he ties into a small bundle. The family will make the offering only after all signs of illness abate, which completes in a specified period of time. The *mudupu* is removed and buried outside. All that remains is to wait and watch.

The divination process consists of stages. Initial divination is to identify the attack of spirits. The "initial divination" focuses on restoring the sick person to health or to restoring the fish catch to its previous abundant level. If symptoms fall down during the period in pulse diagnosis or problem diagnosis, it is concluded that the divination was correct and the cause is identified and correct remedies were given. Until the precipitating causes are evaluated, they bargain on the promised offerings to the attacking spirits. On the success, which indicates that the *dasudu* was on right path, it is inquired further into precipitating social causes.

Subsequent divination begins where initial divination ends, in search of precipitating causes. The social condition of the client's family is examined for disruptions that could have precipitated the spirits' attack. This is aimed to address these disruptions. This can be done only through the thorough argument structure, made up of inferences whose logical links to each other can be investigated and confirmed. In this subsequent divination a rigorous argumentation assumes high prominence.

Chupu rayi

Chupu rayi and Kaaniki are the two forms of subsequent divination. In Chupu Rayi, the seeing stone, *dasudu* visits the patient's house and starts the subsequent divination by sitting on the floor, right elbow balanced on his knee. The *Chupu rayi* , the seeing stone is suspended from his right hand. Several series of questions are asked by the *dasudu* addressing the spirits. The answers from the spirits are given in the form of making the stone swing back and forth and swinging of the *chupurayi* means 'yes'.

Kaaniki

Kaaniki is the second form of subsequent divinitation, in which the *dasudu* along with his client visit a practitioner called as Kaaniki. Questions are asked by the *dasudu* to the practitioner (*kaaniki*). After the each question, the practitioner drops a handful of rice into a vessel which is filled with water. If the rice sinks it means 'no' and if it floats 'yes'. This kaaniki diagnosis process is performed in public, and in the presence of honest observers.

Depending upon the cases, the *chupu rayi* and Kaaniki divinatory practices differ. Chupu rayi is the form of divination used to evaluate the issues which are less severe, less threatening or less difficult. Kaaniki is used to address the social causes that people believe that are more serious or more difficult to find remedy. The performer of the Kaaniki does not belong to fishing community, but usually a member of the *chakali,* washerman caste.

Pati

The process of identification and synthesis using relevant scenarios basing on the available information is called pati. In *pati*, the practitioner and the client,have understanding between them to achieve the results. *Pati* contains series of activities- in the first stage the client's household spirits are identified. Then series of activities relate to identification of efficient causes, identification of precipitating causes and finally prediction, solution and final synthesis. First, the *pati* practitioner recites the list of relevant names by making small verbal gestures of the community pantheon for approval and identification of the household spirits. Basing on identification process, the practitioner initiates the second stage of identification of relevant causes. In the initial scenario, attack by one's own spirits, the failure to propitiate the household spirits which cause illness to the family members of the client's family is traced. Next is the outside spirit attack, caused by other spirits creating illness and problems to the client's family by the other family's spirit.

The *pati* practitioner investigates the background or previous circumstances of the inside or outside spirits attack on the client's family in the third stage. Basing on the preceding inquiry which demonstrates whether the causative spirit is 'inside or outside', the practitioner constructs a secondary scenario. If "inside" spirit is responsible, then it is assumed that the social disputes within the household are responsible and a scenario is constructed which attributes the failure to offer the household spirits resulting in the disputes within the household. Required offerings to the 'inside' spirits are made. If 'outside' spirit is responsible, then the practitioner assumes that some disputes between the households are responsible. This scenario mainly focuses on the relations between the affinal families. Offerings to the attacking spirit are made by the client. The social dispute causing the spirit to attack must be corrected. Unless it is done and the promised offerings are made, there is a possibility that the attacking spirit may attack again. Attention is focused, on selecting strategies for social action. The selection process lasts for some time, as the practitioner proposes and the client accepts,

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amends, or rejects various alternatives for corrective action. Finally, the practitioner assimilates the accepted solution to the argument and represents it to the client as a solution, if it is any good, successfully incorporates all the details that the client considers relevant to the case.
The CKDu patients among the fishing communities, depending on the stage of the kidney disease move from the *naadi chudadam* to *chupu rayi, kaniki* and finally *pati* curative processes. The following personnel are conducting divinations in the study villages:

Table 4.5: Pathulu – Kaanikalu

S. No.	Name	Goddess	Pati/Kaniki	Village
1.	Cheeka Kanthamma	Pedda Ammoru (Polamma Thalli)	Pathi + Kanika	Sariyapalli Village
2.	Sattibabu Adamou	Durgamma Thalli	Pathi + Kanika	Bethalapuram Village
3.	Vadamodulu Mathamma	Polamma Thalli	Pathi + Kanika	Reyyipadu Village
4.	Teddu Gangamma	Ramanamma Bakthrulamma	Pathi + Kanika	Isukapalem Village
5.	Olisetti Pedapolappa	Nookalamma Thalli	Only Pathi	Reyyipadu Village
6.	Olisetti Ellamma	Durgamma Thalli	Only Pathi	Sariyapalli Village
7.	Chintakayala Mutyalamma	Mutyalamma Thalli	Only Pathi	Bethalapuram
8.	Surad Bangaramma	Bangaramma Thalli	Only Pathi	Jagathi Village

Seeing Stone (*Chupu raayi*)
1. Teddi Sattayya – Reyyipadu village
2. Romolu Buggala babu – Isukapalem village
3. Vadamodulu Dandakoru – Jagathi villge
4. Vadamodulu Ganganna – Bethalapuram village
5. Ramolu Sorapababu – Sariyapalli village

Although the above mentioned divination practices are practiced by fishing communities, it is not uncommon to find many CKDu patients belonging to other communities visiting the healers of fishing communities. However, there are certain goddesses which are exclusive to fishing communities of this area. The family members of CKDu patients in the advanced stage propitiate these goddesses by arranging for the village-level festivals to Masenu devata, Gangadevi and Mogadharamma. All these festivals are called as beach festival and they spend huge amounts which are done collectively by the CKDu patients' families of that village.
COPING MECHANISM ADOPTED BY PEOPLE; This study found that 63.73% of the CKDu patients used to consume fish on daily basis and 24.51% eat on alternative days. This is similar to the consumption of chicken as well. Once diagnosed with renal disease, the patient has to necessarily bring in drastic changes in the intake of food and water. Many respondents feel quite dissatisfied with the dietary changes and say that they eat only to survive

ASPECTS OF ANXIETY AND ADJUSTMENTS;
It is observed that Chronic Kidney Disease is a matter of serious concern not just to the patients but results in multiple anxieties to the families as well. People who are diagnosed with CKDu are looked upon as potential invalids as it is a slow killer disease. Such stigma is attached to other members of the family as any member of the family of the CKDu patient, even if they are sick for a known cause, is considered as potential kidney patient. It is one of the reasons that there is general reluctance in disclosing the disease till it reaches advanced stage.
Many respondents expressed that the situation of CKDu has worsening due to lower socio-economic status of the patients. There is a strong association between low socio-economic status and higher incidence of complications related to CKD, as has been attested by multiple studies in United States of America and Canada (Crews et.al, 200). People with a lower socio-economic status had a 59% greater risk of developing CKD.
Treatment for a kidney disease becomes a devastating medical, social and economic problem for patients and their families. When the husband falls sick due to CKDu, generally wife of the patient starts working for whatever returns she may earn. The children take up the responsibility of managing the house and taking care of their parent. In some families, it is observed that the youngsters who either completed their studies or still pursuing started working to compensate the earnings of their house. This study found some students discontinued their studies to take up whatever job that they could secure in farther places. Such youngsters in Kaviti mandal are working as servers in hotels in Hyderabad, Visakhapatnam and Bhubaneswar. Thus, CKDu in the family has been ruining the careers of youths also.
With depleted incomes, families sell off their lands or properties or cattle or any other livelihood sources. It is found that those families who own two to three acres of land had to sell their lands to meet the expenditures of treatment and turned daily wage labour. Since most of the patients in this study fall in lower income group, they borrow money from moneylenders who collect daily interest. As the stage of the CKDu advances, there is escalation in the costs of treatment either for regular dialysis or susceptibility to other associated ailments such as diabetes, hypertension and cardiac issues. Thus, the costs of treating this disease are considered as 'catastrophic health expenditures'.
This study observed that CKDu resulting in strained marital relations in the affected families. Few cases are reported wherein the wife gets affected by CKDu, the husband married his wife's sister or to another woman while the first wife

remains single. It is known that men and women with advanced CKD often have difficulties with sexual function and infertility. In some cases, the parents of the wife compelled separation of the young couple as the wife does not conceive or no more chances to get pregnancy as the male partner is affected by CKDu. Another pertinent issue after that prevalence of CKDu is that even the consanguineous relatives hesitate to go for alliances with the families of CKDu patients. As a result, these families find it difficult to get matches to their daughters and some had delayed marriages and found alliances much farther the usual marital distance. Few CKDu families have paid huge sums as dowry for their daughters. Even boys find it rather hard to get decent alliances as there is apprehensions of inheritance of the kidney disease. Parents often request the news reporters not to publish the details of CKDu in their village for the fear of their children not getting proper matrimonial alliances.

It is observed that Chronic Kidney Disease is a matter of serious concern not just to the patients but results in multiple anxieties to the families as well. People who are diagnosed with CKDu are looked upon as potential invalids as it is a slow killer disease. Such stigma is attached to other members of the family as any member of the family of the CKDu patient, even if they are sick for a known cause, is considered as potential kidney patient. It is one of the reasons that there is general reluctance in disclosing the disease till it reaches advanced stage.

SUMMARY AND CONCLUSION:

The present study relates to Chronic Kidney Disease of unknown aetiology (CKDu) in the Uddanam region of the Srikakulam district of northern Andhra Pradesh state in India. The Government of Andhra Pradesh officially acknowledged that 70% of the total kidney ailments in the state of Andhra Pradesh are from the Uddanam region. As compared to other nephropathies of unknown ethology, Uddanam endemic nephropathy is the least understood and the least publicized. Although Chronic Kidney Disease has been reported for over two decades among certain ethnic populations in particular geographies across the world as a mysterious disease, it drew attention of only few Anthropological works. This study is envisaged to understand Uddanam nephropathy from an Anthropological perspective. Since the causative factors have not yet been identified, the endeavour is to bring out a holistic understanding of the prevalence, cultural construction of illness behaviour, perceived aetiologies and their effect on therapeutic approaches to healing and overall impact of CKDu on lives of people in Uddanam region.

In this study CKDu patients expressed plausible reasons for 32 deaths of their relatives in the study area. It can be observed that most of them, 17 individuals, stated that deaths are due to insufficient medical facilities in the area and 13 individuals expressed lack of financial support and 2 members felt that irregular testing led to the deaths.

CKDu patients complain that the state government is currently prioritising selective programmes such as Family Doctor, etc. in view of electoral gains and attention on CKDu got diverted. The private industrial units like pharmaceutical companies and thermal power plants, etc which damage the environment have been trying to impress people with their charity. In the wake of kidney disease, there has been commodification of drinking water and people have to spend on treated or reverse osmosis (RO) water wherever government supply of pipe water is not present. There are no studies yet on any reduction of CKDu prevalence and disease progression as a result of the introduction of RO water and how villagers perceive these changes.

It is too well known that the main goal of health education camps conducted by the government is to prevent CKD by providing increased awareness among the people in general and patients in particular about their condition and the outcome of lifestyle modifications. To delay the progression of kidney disease among the affected and to create confidence among them have been another objective. It is significant to find that as many as 63.73% of the total CKDu patients in the present study are illiterate and 16.67% have studied up to primary level.

The clinically valid approaches for detecting, preventing, and slowing the progression to ESRD, consisting of early referral and patient education, are widely available but sparsely used in practice. It is observed that there is a disconnect between the healthcare providers and the patients. The health education modules need to be modified to be culturally amenable and suit illiterate villagers.

In their attempts to deal with CKDu, patients and their families come in contact with different people such as government officials, public health researchers, toxicologists, journalists, health and environmental activists as well as anthropologists. This research has observed that the patients and members of their families at times are drawn into favouring of some voices over others and they inadvertently get drawn into politically sensitive aspects of contemporary controversy. As Kierans (2019) explains, the aspect of communicative inequities becomes relevant as what can and cannot be said about CKDu is 'not only contingent on a descriptive politics of evidence, but on a political economy of healthcare provision that designates what can and cannot be treated'. In their everyday arbitrations, people of Uddanam reveal communicative inequities when the issue of whose descriptions of CKDu matter most.

While studies so far on CKDu indicate a multi-factorial causation of pollutants in water, exposure to environmental and other nephrotoxins such as herbal medicines and analgesics. On the other hand 53% of the patients in this study sample had at least one member in their family with CKDu thus indicating genetic susceptibility.

All that people receive are suggestive measures to prevention of disease by providing pure drinking water, cleaning water resources, disease awareness and education to adults and school children. Other measures are emphasized, such as cessation of smoking, alcohol consumption, control of high salt diets, painkillers medications, promoting organic farming, banning certain agrochemicals and need to change life style.

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With inconclusive tests, the dependency on religion increases and it is thus not surprising that patients' reactions to and beliefs about CKDu are strongly shaped by what is available and what they thus observe in the local context. Doctors say that about 40% of CKDu patients who decide to go to hospitals eventually die because they approach at an advanced stage of renal disease.

Many CKDu patients find themselves in the vortex of helplessness. A couple who are both tested for CKDu ventilate their anguish, "From the moment we got to know, we started a course of medicines that the doctor prescribed, but there was nothing else we could do. Once it strikes, we just resign ourselves to our fate," they add "what about the future of the young men and women and even children who get affected by this disease?".

This predicament could be addressed by developing specific practice strategies which are designed to strengthen the understanding and communication between clinicians and patients around cultural issues in renal care. It becomes vital to appreciate how patients' different understandings of the underlying causes of their renal disease have critical implications for the particular kinds of hopes, fears, and willingness they bring to the medical encounter. Cultural competence has increasingly come to be understood not as a body of knowledge to master, but rather as respectful attitude and a communicative approach for providing renal care that is more fully culturally attuned.

This study observed that CKDu resulting in strained marital relations in the affected families. Few cases are reported wherein the wife gets affected by CKDu, the husband married his wife's sister or to another woman while the first wife remains single. It is known that men and women with advanced CKD often have difficulties with sexual function and infertility. In some cases, the parents of the wife compelled separation of the young couple as the wife does not conceive or no more chances to get pregnancy as the male partner is affected by CKDu. Another pertinent issue after that prevalence of CKDu is that even the consanguineous relatives hesitate to go for alliances with the families of CKDu patients. As a result, these families find it difficult to get matches to their daughters and some had delayed marriages and found alliances much farther the usual marital distance. Few CKDu families have paid huge sums as dowry for their daughters. Even boys find it rather hard to get decent alliances as there is apprehensions of inheritance of the kidney disease. Parents often request the news reporters not to publish the details of CKDu in their village for the fear of their children not getting proper matrimonial alliances.

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MEDIA AND MITIGATION;

It is strongly mentioned that deficiency of quality leadership being the root cause of all problems plaguing this region. Till the media personnel identified and started reporting about CKD in the year 2000, the issue of prevalence of kidney disease has not been recognised. Although people of Uddanam are very much concerned, the political intervention came in after 12 years when K.Yerran Naidu, the then Member of Parliament from Srikakulam under whose constituency Uddanam region falls, brought in few initiatives in the year 2012. In the same year the Telugu movie star-turned politician and president of Janasena party(JSP), Pawan Kalyan launched an agitation supported by the Communist parties and various social organisations against the Government for its apathy and failure to allocate funds. Both state and central governments responded by sending medical teams to make studies on Uddanam Kidney disease. Medical screening in Uddanam area was initiated by government of Andhra Pradesh in 2017.