



VR ROOM TREATMENT



Parijma Neurodiagnostic & Rehabilitation Centre

Developed by HD FALCON | Designed by 3D Content Studio

Introducing the first of its kind in India, “**AKHIL Virtual Reality Room**”

AKHIL (in Devanagari: अखिल) as the name connotes - "whole".

This innovative treatment is a Growth oriented, complete, novel, effective and safe treatment for situation specific anxiety and fears/phobias along with giving real-life experience for children aged between 3-18 years old with ASD and average ability. The treatment comprises sessions of Cognitive Behavior Therapy within a personalized Immersive Virtual Reality environment, equipping young people to manage their anxiety. It will also act as a medium of teaching by immersing them in a world of colour, nature and real world experiences. This will help them to learn and absorb better and faster.

What is अखिल VR Room?

AKHIL VR ROOM is an Assistive Virtual Reality technology that can be used to support and enhance communication & learning for children with **Autism**, regardless of speech ability. It is a modified cognitive behavior therapy delivered by a health care professional within an innovative Immersive Virtual Reality setting. No goggles are required.

**“Tell me and I forget, Teach me and I may remember, Involve me and I learn”
Benjamin Franklin**

- The treatment is made up from Initial preparatory work around emotional understanding and planning therapy/treatment.
- During treatment, the young person sits inside the Virtual Reality Room with a therapist.
- Projected images & videos on the walls & ceiling of the Virtual Reality Room are made to replicate the young person’s individual situation specific anxiety – for example, a specific home, school or community based situation that can be visually represented, and that which causes them anxiety.
- The health professional works with the young person on cognitive and behavioral strategies that are likely to be helpful in dealing with their real-life scenarios.
- The therapist will work on this situation specific virtual reality life scenarios with the child and guide him/her to overcome it.
- Multiple tailor-made videos can be created for different children with different abilities, each video focused on improving the child's limitations. It could be a video on colours, numbers, animals, nature etc.
- Children with Autism and ADHD can be taught much better and faster because they will be fully involved in this realistic virtual environment.

Benefits

- Lead to improvements in situation specific anxiety, phobias and fears for most children, meaning real life functional improvements for activities that were previously not possible.
- Have a lasting effect – from the research and clinical information available at present, most children who benefit continue to do so even after 12 months.

VR Room Includes

Most situations that can be visually and audibly represented can be treatment targets.

- VR Forest with wildlife and waterfall
 - VR Public spaces like shopping malls, etc.
 - VR Road with Pets, vehicles & pedestrians
 - VR Scenes in various lighting
 - VR Parks
 - VR Snow mountains
- and many more VR Scenarios



Exclusive Feature: Ability to showcase different Actual Real-World locations in VR Room opening up endless possibilities.

How **अर्की** VR Room started ?

The project was conceptualized under the able and experienced guidance of Dr. Suresh Rao Aroor and Dr. Sudhindra Aroor, and aided by other like-minded professionals, in particular, Dr. MSPLN Raju, MBBS, DCH (London) of Kakinada, Andhra Pradesh.

Dr. MSPLN Raju is an practicing pediatrician with over 40 years of experience in medical care for children. In addition to being highly dedicated, he is also personally concerned with the wellbeing of children on an emotional, mental and physical level. He empathizes with parents concerns about the health of their children by providing medical care and guidance in a caring and compassionate way.

Our efforts are to make PARIJMA into one of its kind, unique, equipped with latest technology, affordable Pediatric Neuro Rehabilitation Centre that is available to all needy, especially in areas where there is a dearth of such quality facilities.

By the strenuous efforts and able guidance of Dr. Sudhindra Aroor, this new year 2022, another innovative feather is being added to PARIJMA - which is both joyful and effective.



About Parijma Neurodiagnostic & Rehabilitation Centre

Parijma Neurodiagnostic & Rehabilitation Centers, Bengaluru & Mangaluru is & continues to be a pioneer in the field of pediatric neurology & neuro-rehabilitation for the last 30 years.

Parijma is the brainchild of Dr. Suresh Rao Aroor, one of the first pediatric neurologists of South India & it has been his untiring endeavour to provide “TOTAL & COMPREHENSIVE PEDIATRIC NEUROLOGY CARE UNDER ONE ROOF”

Under his able guidance, PARIJMA brings together super-specialists of neurology & all its allied fields to work together for overall development of each child. Founded & run by pediatric neurologists, Parijma has the largest & most comprehensive exclusive pediatric neuro-rehabilitation facility in the private sector. We have a multi-disciplinary team of > 35 dedicated therapists in the fields of Physiotherapy, Child psychology, Early intervention & Infant stimulation, Occupational therapy, Speech therapy & Remedial / Behaviour therapy.

We have among the biggest set-ups for exclusive pediatric neuro-rehabilitation in the country with a multi-level & customized rehabilitation plan for each child & every child monitored at every level of different therapies till graduation. With over 30 years of experience in exclusive pediatric neuro-rehabilitation, we have developed our own customized therapy equipment as well as innovative & fun therapy activities for optimum child development. This is borne out by the trust of thousands of parents and our vast number of children with neuro-developmental disorders who have now graduated from Parijma.



Facilities

- Neurology Consultations
- Physiotherapy & Neuro-Rehabilitation
- EEG, ENMG, BAER, VEP
- Speech Therapy
- Psychological Assessment
- Group Therapy
- Infant Stimulation
- Behaviour & Remedial Therapy
- Occupational Therapy
- IMPRESSC Therapy
- TRAMS Therapy

Speciality Areas

- Pediatric Neurology
- Autism
- Epilepsy
- Cerebral Palsy
- Child Psychology
- Headache
- Neuromuscular Disorders
- Learning Disabilities
- Hyperactivity
- Intellectual Disability

Our expertise in the above areas are both in terms of trained specialists & also novel & unique treatments.

What is Autism?

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by problems with communication and social interaction. Children with ASD often demonstrate restricted, repetitive and stereotyped interests or patterns of behavior.

Clinically, there are 2 types of Autism:

Primary Autism

Autistic features develop between 1-2 years of age in an otherwise normally developed child.

Secondary Autism

Autistic features develop mainly due to pre-existing brain damage or poor brain development.

Common signs & symptoms of Autism

1. Speech delay or speech regression
2. Poor eye contact
3. Poor social skills
4. Poor response to name call & to command
5. Poor sitting tolerance

How common is it?

The present yearly incidence rate is around 1 in 59 children. However in the last 5-6 years, the incidence rate has gone up tremendously.

What are the causes for Autism ?

The most current research demonstrates that there is no single cause. It is a combination of genetic, environmental, dietary & other as yet unidentified factors.

Known potential causes are:

1. Genetics

More than 100 genes have been identified in children with autism. More are being identified monthly.

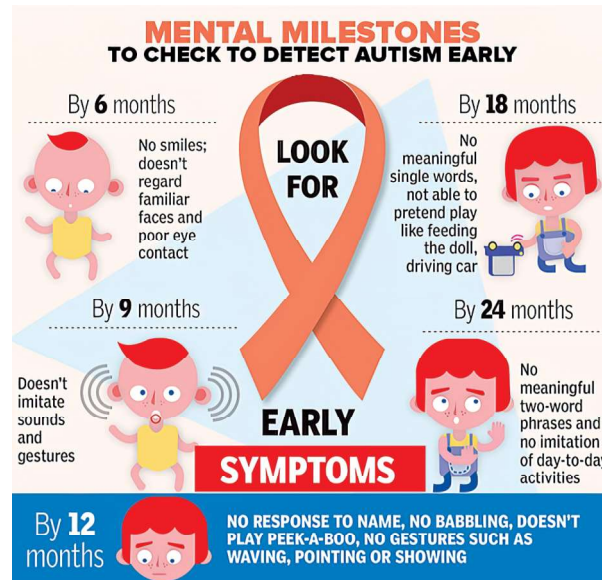
2. Environmental factors

Some of the factors are maternal stress during pregnancy or birth related complications, inadvertent under-stimulation or less interaction with the child during his developing years due to family or parental issues.

3. Dietary / gut dysbiosis theory

Also called Leaky gut theory. It is known that the gastro-intestinal system has various good bacteria known as microbiomes that are needed for proper absorption of various nutrients. This is one of the factors for a proper brain development.

The leaky gut theory states that due to various reasons (one of them being maternal high fat diet during pregnancy), the micro- biome level in the newborn gets altered. Due to this, there is a loss of adequate nutrient re-absorption leading to Autism. In the end, there is no one single cause for Autism. The cause is likely due to a genetically susceptible child (child with a small genetic mutation) getting further affected by any of the above or other causes leading to Autism.



Early signs of Autism

How is Autism diagnosed?

All children with the previously mentioned clinical features suggestive of Autism spectrum disorder, need to be evaluated by a clinical child psychologist.

A screening test known as Psychometry is done. This is done with the parents and the child in person or online. This will tell us the overall mental development of the child & his/her autism score & the score for hyperactivity.

Based on this, the score is classified as mild, moderate or high risk for Autism spectrum disorder.

Most of the children who fall on the mild category do very well with intensive and appropriate early intervention therapy over time. The children on the other set of scores also do well with the therapy, but it depends from child to child & the facilities available.

What are the treatments for Autism?

There is no single treatment for Autism. It is a combination of:

1. Early intervention therapy
2. Medications
3. Supplements & diets

1. Early intervention therapy

Infant stimulation

Here, the child psychologist (trained in infant stimulation techniques separately) will have 1 on 1 sessions with the child. Starting from the basics, the child is taken through many levels of activities with different developmental tools and toys to improve their sitting tolerance, eye contact and overall comprehension and response.

This therapy is provided at [Parijma Medical Centers](#) & is usually done for children with a mental age < 2-3 years.

Occupational therapy

This forms the backbone of the fight against Autism Spectrum Disorder. This is usually the next level of therapy after infant stimulation. It can also be done as the first line of therapy in children who have been diagnosed with ASD at a later age. Occupational therapy involves a lot of physical, mental & sensory skills improving activities using a variety of toys & other equipment.

This is done to improve the child's core strength, response & comprehension, sitting tolerance & sensory skills related improvement.

Speech therapy

Now, once the child has improved with the above mentioned therapies & has attained a basic to decent level of eye contact, response & comprehension, we then move onto speech therapy. Here, the speech therapist will do an initial evaluation & the child's speech status and difficulties are determined. A customised speech therapy plan is then started.

Speech therapy uses a lot of verbal, non verbal, images, flash cards & picture books among others to get the best out of the child with regard to speech and communication.

Remedial & behaviour therapy

This is one of the last levels of therapy for children with ASD. This is usually started when the child has attained a good level of response, eye contact, comprehension with or without fair vocal skills.

This therapy is mainly to iron out residual behaviour issues and start off the child on his/her reading and writing skills. In effect, this is to prepare the child for a classroom setting.

Group therapy

Group therapy is done as a part of any of the above mentioned therapies. It can also be done separately if social skills improvement is the main need of the child.

What has been seen in most children with ASD is that no matter how much a child with ASD improves, 2 features usually are always seen – residual mild to moderate impulsivity and poor social skills. Group therapy is done to improve these features.

2. Medication for Autism

Medicines for treating autism are most effective when used in conjunction with behavioral therapies. Ideally, medicines are a complement to other treatment strategies as advised by the Doctor.

3. Supplements and diet

Many kids on the autism spectrum have nutrient deficiency related to selective eating, poor absorption in the gut, or depletion of nutrients from chronic stress. Repleting nutrients with diet and nutrition supplements can often be a missing piece of the puzzle and help kids feel their best & thrive. The supplements and the diet are not “magic” which will help all children a partial or good benefit in many children with autism.

“Medication” and “Supplements & diet” are relatively safe, but given only on the advice of the doctor.

AUTISM

1. Get the child's attention before you give out instructions.

Call their name before you give an instruction. For example 'Freddy it's time to go for lunch.'

2. Use clear and consistent language.

Use visual clues or symbols along with words as this will make your instructions easier to follow. Autistic people are often visual learners.

3. Give the child time to process the info.

Try using the 10 second rule. Count to ten after giving an instruction. If you have to repeat the instruction after the ten seconds, remember to use clear language.

4. Make sure that you say what you mean.

Avoid metaphors, sarcasm and idioms.

5. Include pictures and model activities.

Autistic people learn better when they see things. Visual supports are very helpful in preparing for changes and explaining information.

6. Teach a new topic in as many situations as possible.

The child may find it difficult to 'generalise' a new skill or apply a skill in a new way in different contexts.

7. Keep things calm and simple.

Your behaviour will affect the child's mood and behaviour.

8. Have consistent rules and routines. It's important your child understands what you expect.

Rules need to be explained explicitly using visual supports.

9. Expected behaviour is modelled by the adults.

Adults not working by the rules that they set for others, damages trust and rapport with the pupils.

10. Understand that behaviour is a form of communication.

Ask yourself did we allow the child to communicate productively?

11. Use a 'place of peace.'

Having a 'place of peace' can help a child to recover after a stressful experience.

12. Like any child / young person, a pupil with autism is completely unique.

Get to know them!



Understanding Autism

While there is currently no known single cause of Autism, early diagnosis helps a child receive the support and services that they need, which can lead to a quality life filled with opportunity.

Treatment for ASD should begin as soon as possible after diagnosis. Early treatment for ASD is important as proper care can reduce the individuals difficulties while helping them learn new skills and make the most of their strengths.

With the wide range of issues in children facing with ASD, there is no single best treatment. However, working closely with a doctor or health care professional is an important part of finding the right treatment program.

It is important to note that when the challenges of autism are understood and appropriately addressed, and the autistic is accepted for who they are, the potential of a child on the autism spectrum is no less than a neurotypical individual. Too many professionals look at autism as something that needs to be controlled and contained. Autism, as a neurodiversity, needs to be understood to bring out the child's full potential.

There are for sure aspects of Autism that are disabling and very challenging. Nevertheless, seeking to understand the neuro-developmental differences in an effort to promote growth and development can help the autistic individual reach their potential while addressing the disabling aspects.

Our Pioneers



Dr. Suresh Rao Aroor

Parijma is the brain child of Dr. Suresh Rao Aroor, a qualified Pediatric Neurologist.

He has conceptualized the need for multidisciplinary team approach for most neurologic disorders and has started this very unique institute, which has most disciplines required for the diagnosis, treatment and rehabilitation of such patients. – Total neurocare under one roof.

Education Qualification:

- M.B.B.S., D.C.H., M.D., (PAED) – Kasturba Medical College (KMC), Mangalore
- D.M. (NEURO), NIMHANS, Bangalore
- Fellowship in Pediatric Neurology from University of California at Los Angeles – UCLA (U.S.A.)
- FRCP (Glasgow).

Work Experience:

- 1.Worked at National Institute of Mental Health and Neuroscience (NIMHANS), Bangalore for 11 years as Faculty in Pediatric Neurology (1981-1991)
- 2.Worked – 10 years at Manipal Hospital, Bangalore as HOD & Chief Neurologist (1991-2002)
- 3.At present working at Parijma Neurodiagnostic and Rehabilitation Centre, Bangalore & Mangaluru as Director and Pediatric Neurologist(1991–till date)

Numerous special achievements, honours, affiliations & publication to his credit.



Dr. Sudhindra Aroor

Dr. Sudhindra Aroor is a renowned Paediatric Neurologist at Parijma Medical Centers.

He has initiated the VR Room Concept for the treatment of Autism. Main interests and expertise lies in the field of epilepsy, headache and stroke disorders. He is a well-known member of the Indian Academy of Paediatrics & Indian Academy of Neurology.

Education Qualification:

- M.B.B.S., M.D., (PAED)-K S Hegde Medical Academy, Mangalore
- D.M. (NEURO) – MS Ramaiah Institute of Neurosciences, Bangalore

Work Experience:

- Consultant Pediatric Neurologist at Parijma Medical Centers – Wilson Garden, HBR Layout, Bengaluru & Parijma Institute of Neurosciences – Falnir road, Mangaluru
- Visiting consultant Pediatric Neurologist at Rangadore Memorial Hospital & Malathi Manipal Hospital, Bengaluru.

Numerous special achievements, honours, affiliations & publication to his credit.

Ashwasan Charitable Trust

ASHWASAN CHARITABLE TRUST is a charitable wing of Parijma Neurodiagnostic and Rehabilitation Centre formed by a group of like-minded people and few faculty members of Parijma.

Our Aim

- 1.To provide for overall improvement of physically & mentally challenged children including those with neurological disorders like cerebral palsy, epilepsy, mental retardation, autism, learning disability etc.
- 2.To provide a platform for parents to come together to avail of organised and comprehensive services for their children.
- 3.Dissemination of scientific and up to date information on neurological disorders by doctors and therapists.
- 4.Setting up of a corpus fund which can be used for medical and therapy expenses of needy patients.

Our activities

- 1.Distribution of free anti epileptic drugs. Authentic patients who are below poverty level are identified and supported. (At present, around Rs 4 Lakhs worth of medication are being dispensed annually to these patients).
- 2.Providing special appliances to handicapped children for their rehabilitation.
- 3.Completely voluntary based trust. All work carried out by volunteers & trustees without monetary returns.
- 4.All events and promotions organised annually are sponsored by corporate organizations. Hence all donations are used only for betterment of disabled children.

Donations

We welcome donations from public which are INCOME TAX EXEMPT (under section 80G)

About Development Team

HD FALCON in collaboration with 3D Content Studio designed and developed the AKHIL VR ROOM **“A fusion of design and technology.”**

HD FALCON: specializes in providing professional digital marketing display products. We provide our customers with a one-stop solution for commercial display products, especially , 3D holographic display, Digital free-standing kiosk, Rear projector displays and Curved/flat video wall solutions. Our products are widely used in all kinds of high end applications, such as banks, hotels, board rooms, public control center, airport, military monitoring center and more."

3D CONTENT STUDIO: We provide Highest Quality 3D Holographic Content, 3D Product Visualization, Professional Logos Designs, 3D Animation & Visual development & Augmented Reality development & IoT. We create personalized, engaging and impactful content by using novel technologies. We help companies sell their products by providing 3D product animation and video production services. Our team is spread across the world, dynamically working together through efficient project management and cloud storage.



VR ROOM TREATMENT

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