

# PHYSIO FORUM

ANNUALLY PUBLISHED PHYSIOTHERAPY NEWSLETTER

## Editorial Board

### Mentor

Mr. Denish Patel  
Executive Vice President,  
RK University (RKU)

### Chief Editor

Dr. Priyanshu V. Rathod, PT, PhD  
Director,  
School of Physiotherapy  
RK University (RKU)

### Editor

Dr. Amit Sharma  
Deputy Director,  
School of Physiotherapy  
RK University (RKU)

### Co-Editor

Dr. Urvi Pithwa & Dr. Kajal Pokar  
Assistant Professor,  
School of Physiotherapy  
RK University (RKU)



School of Physiotherapy, Faculty of Medicine,  
RK University, Rajkot-Bhavnagar Highway, Rajkot 360020  
Tel: 9909952030 | Email: spt@rku.ac.in

SCHOOL OF  
PHYSIOTHERAPY  
RKUNIVERSITY



page CURRICULAR & EXTRA  
CURRICULAR  
ACTIVITIES AT SCHOOL

04

- Cardiopulmonary resuscitation (CPR)
- World Heart Day 2019
- Sports Physiotherapy Camp
- Flexibility & Mobility Camp
- International day of Elderly Celebration

page PHYSIOFEST 2020

16

- Paper Presentation winners (UG)
- Paper Presentation winners (PG)
- List of Winners
- Picture Gallery

page RAJKOT FULL MARATHON

07

- World Physiotherapy Day
- RKPRRC
- PDSG
- Ergonomics & Zumba

page STUDENT'S CORNER

20

- Student Achievements
- Shinning Alma
- Galore



FOR A PAIN-FREE LIFE,  
THERE'S ONE NAME YOU CAN TRUST

**Dr. sayani's**  
renewing LIFE

Over 2000 products  
60 years of service  
Lakhs of satisfied patients

Dr. Sayani's has a product to counter and relieve every possible pain you may have in your body. So, there's no need to endure the discomfort, and suffer the pain, when relief is at hand. Choose from our vast range of products.



Pillows | Health Care Products | Fitness Products | Home Care Products | Hospital Furniture | Gym & Fitness  
Occupational Therapy | Footwear & Footcare | Wheelchairs & Walking Aids | Diabetic Footwear | Orthopaedic Footwear

**Dr. Sayani's Healthcare Pvt. Ltd.**

# 6-2-662, Street No.7, Ground Floor, Lane Opp. Shadan College, Khairatabad, Hyderabad - 500 004. T.S. India. Tel : +91 40 2332 7491, Mob : 98851 67862  
HIG-214, KPHB Phase 1, Kukatpally, Hyderabad-500 072, T.S. Tel : +91 40 2305 0080, Mobile : 98851 67864

## Basic life support life saving skill **Cardiopulmonary resuscitation (CPR)**

Basic Life Support – Life savings skill - Cardiopulmonary Resuscitation (CPR) – a workshop held on 13th April, 2019 for students by Academia of Traumatology, Ahmedabad affiliated to American Heart Association (AHA) at RK University, Rajkot. 25 participants arrived from all over Gujarat including students from Baroda Medical College, Bhavnagar Medical College, KM Patel Institute of PT, Karamsad and UG and PG students of School of Physiotherapy, RK University. Instructors from Zydus Cadila Super Specialty Hospital, NHL Medical College had taken keen interest in blended learning / teaching a BLS course of 5 credits hours approved by AHA (American Heart Association). Written and practical exams were considered for certification.



## **URBAN COMMUNITY HEALTH CAMP**

Urban Community Health Checkup camp organized on 2nd April, 2019 by School of Physiotherapy were Dr. Namrata Sojitra, Dr. Komal Doshi, Dr. Krupa Tank & Dr. Avnee Vajar had accompanied the students at Reliance mall, Big Bazar & Crystal mall respectively. The camp was started with musculoskeletal assessment of all the employees of various malls. More than 150 employees took the benefits of physiotherapy camp in which "Musculoskeletal Disorders" of employees of malls were screened and their vital health status was measured in form of blood pressure and Pulse rate. The employees were also given basic physiotherapy management for functional limitation and life style modification along with ergonomic advices.



Celebration of **International Yoga Day**  
at RK University



Celebration of **World Book Day**  
at RK University



## Summary report of camp for flexibility and mobility

Camp was organized by Dr. Mayuri & Dr. Mayank Raval with PG Scholars on 19th July 2019 at SPT-OPD, School of Physiotherapy, RK University, to assess the tightness of muscles and treat it by stretching. Total 19 Patients from rural areas of Sardhar, Gadhaka, kalipat, Halenda, tramba had availed the advantage of the camp. In camp patients availed free consultation, diagnosis and treatment.



## Physiotherapy support from RKU in Gujarat state ranking badminton championship

The badminton tournament was organized by Rajkot Municipal Corporation and Saurashtra Badminton Association from 2nd June to 9th June, 2019 at Veer Savarkar Indoor Stadium, Rajkot, Gujarat. Dr. Harshad Morasiya, Dr. Vaibhav Dave, Dr. Ankita Rajjada, Dr. Prachi Oza, Dr. Neha Savaliya, Dr. Hardi Mehta served as a sport physiotherapist in this tournament. In this tournament more than 40 players having injuries like Ankle sprain, Muscle strain, Muscle cramp, Jumpers knee, Shoulder pain, Tennis elbow, Golfer's elbow, Rotator cuff tendinopathy etc. were treated. The main goal was to prevent and treat the sports injuries in all badminton players.



## Inter Corporation League Cricket Tournament 2019 At RMC

ICL cricket tournament was organized from 1st June 2019 to 8th June 2019 by RMC ( Rajkot Municipal Corporation). Dr. Mayank raval, Dr. Akshay kachha, Dr. Mayuri topandasani, Dr. Shivani, and Dr. Harshad moraiya served as a sports physiotherapist in tournament.



## International Day of Elderly Celebration – 2019

1st October is celebrated worldwide as International Day of Elderly. On this day, focusing on focal theme of 2019 - "Journey towards age equality" School of Physiotherapy, RK University had arranged various Fun & Learn Activities for Happiness of Elderly along with making them physically & mentally more strong by various exercises, This program was arranged at Pipaliya Bhavan, Sadbhavna Ashram, Rajkot. More than 150 elders took the benefit from this program. The event was coordinated by Dr. Komal Doshi & Dr. Mansi Sanghavi.



## Summary Report of Advance Electrocardiogram Learning CPD

An Advance Electrocardiogram Learning Workshop was organized in School of physiotherapy, RK University on 30th June & 14th July 2019. The Workshop Credit Value was of 8 hours. Workshop was conducted by Dr. Nidhi Ved, Under the Guidance of Dr. Priyanshu Rathod & Dr. Amit Sharma. It was Conducted in 2 Batches where Students, from School of Physiotherapy, School of Ayurveda, School of Pharmacy as well as Faculty & academicians had came to attend the workshop



## ICU VISIT FOR FINAL YEAR BPT STUDENT

ICU Visit was Conducted for Final Year students of Bachelor of physiotherapy on 3rd February 2020. 87 Students were divided into 4 groups and visited 4 different places like Sterling Hospital, Olympus Hospital, Gokul Hospital & B T Savani Hospital. Event was Planned and Organized by Dr. Nidhi Ved.



## WORLD HEART DAY - 2019 "camp For Industrial Workers"

The World Heart Federation declared 29th September as a "WORLD HEART DAY". In context to this, The School of Physiotherapy, R.K. University is celebrating this day every year. This year the day was celebrated with an onsite visit to DHAVAL AGRICULTURE INDUSTRIES, BEDI, RAJKOT. Physiotherapy camp was organized to assess the physical fitness of employees. Around 125 employees took advantage of the health checkup camp. The registered employees were then directed towards the checkup area. Blood pressure, Pulse rate, Respiratory rate, SPO2, PEFR and PFT was measured and recorded. The fitness capacity of the employees were also checked by the TECUMSEH step test. After doing the checkup, consultation was done and physiotherapy advice was given to them. Workers were Highly satisfied with Health checkup and appreciated efforts taken by students of school of physiotherapy.

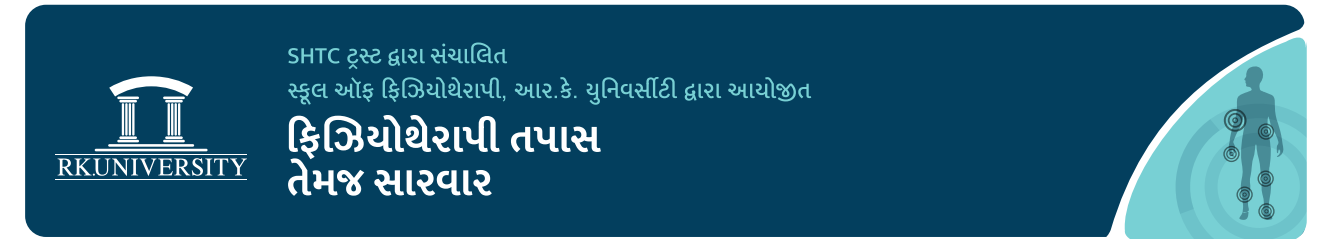






School of Physiotherapy celebrates **World Physiotherapy Day** every year to spread awareness about Health and Wellness. In context to the focal theme of 2019 "Physiotherapy in Chronic pain", students and faculties had organized various activity as below:

- Walkathon and Fitness challenges
- Ergonomics and Zumba session for Traffic Police
- Camp for Chronic pain at RKPRRC







સ્કૂલ ઓફ ફિઝિયોથેરાપી, આરકે યુનિવર્સિટી દ્વારા સંચાલીત  
**પાર્કિન્સન (કંપવા) ના દર્દીઓના લાભાર્થે**  
**પાર્કિન્સન ડિસિઝ સપોર્ટ ગ્રુપ (PDSG) ની સભાનું આયોજન**



સ્કૂલ ઓફ ફિઝિયોથેરાપી, આરકે યુનિવર્સિટી દ્વારા સંચાલીત  
**ઘુંટણની સંભાળ માટે Rajkot Knee Club**  
**ની સભાનું આયોજન**



## WEBINAR CONDUCTED BY THE STUDENTS.

NAME OF STUDENT AND GUIDE	TOPIC
Karran Parmar, Margi Ghodasara, Vishad Jethva, Dolly Lunagariya, Darshank Kansagara, Yogeshwar Patel <b>Dr. Swati Dhrangu</b>	Trapezititis due to overuse of mobile in lockdown?
Dhvani Kukarvadiya, Darshna Dabhi, Komal Boda, Hetvi Makadia, Tarjani Gosai, Drishty Changela <b>Dr. Krupa Raithatha</b>	Boost your immunity by physical therapy
Aksha Undhad, Meera Lathigara, Kajal Joshi, Dhruvi Agravat, Payal Bharadva, Khushbu Tarkesha <b>Dr. Priyanshu Rathod</b>	Physiotherapy consultation and counseling for badminton players
Helly Butani, Janvi Bhalodiya, Dhara Balar, Dhara Makasana, Ayushi Sabhaya, Hiral Harkhani <b>Dr. Nidhi Ved</b>	An awareness program for teenage girls about menarche complications and role of physiotherapy to overcome the hurdles.
Mehul Ghodakiya, Ghanshyam Ghodakiya, Shivradsinh Jadeja, Atul Dangar, Dravid Solanki, Dharmesh Mori <b>Dr. Amit Sharma</b>	Neck pain due to mobile usage during the quarantine
Shivani Vyas, Janvi Modh, Nirali Koradia, Priyanka Jadeja, Koshik Pandya, Nikhil Gujarati <b>Dr. Komal Doshi</b>	How football players can maintain and improve physical fitness during lockdown
Mansi Maru, Shraddha Rangani, Krupali Gajera <b>Dr. Ankita Chauhan</b>	Fitness and nutritional awareness for the obese adult population
Bhumi Khunt, Hina Chavda, Sarita Lunagariya, Dhruvi Kantaria, Swapana Gamit, Tanvi Jogani <b>Dr. Chirag Solanki</b>	Physical activity for children to make them active during lockdown
Neha Meriya, Mansi Pandya, Urvashi Nimavat, Jitaxi Vaishnav, Satish Bhaliya, Pathik Begda <b>Dr. Komal Doshi</b>	Let's deal with knee pain and live without pain
Bansi Gajera, Khyati Domadiya, Selvi Ponkiya, Upasana Prajapati, Nensi Rabadiya, Payal Sagar <b>Dr. Shweta Rakholiya</b>	Knee care for housewives
Parul Chuhan, Krima Dodiya, Mital Odedara, Ritu Padalia, Dhara Padaria, Reema Boghra <b>Dr. Mansi Sanghvi</b>	Musculoskeletal pain and its treatment for home for public living at home during lockdown phase of COVID-19 disease
Dharti Panchasara, Dhavani Nimavat, Monika Vidja, Anjali Moradiya, Sonali Bhalodiya, Krupali Miyatra <b>Dr. Krupa Tank</b>	Let's spread awareness of de Quervain's syndrome in housewives
Mital Araniya, Ekta Nagla, Shriya Rachchh, Eshita Upadhyay, Grishma Manek <b>Dr. Namrata Sojitra</b>	Are you suffering from the pain during the menstrual period? Let's relive that with the help of physical therapy exercise and muscle relaxation techniques
Dhara Aparnathi, Parul Dhadhal, Hemali Gosrani, Mansee Shah, Khevna Kumbhani <b>Dr. Janki Aghera</b>	Role of physiotherapy in menopause
Nirali Gadhvi, Nirva Babariya, Kamlesh Vadher, Uday Gajipara, Hitesh Sidapara, Gautam Vora <b>Dr. Mayuri Jivani</b>	What to do to prevent dance injuries



**RKUNIVERSITY** **SCHOOL OF PHYSIOTHERAPY**

A webinar on  
**WRIST & HAND BIOMECHANICS**  
April 25<sup>th</sup> & 26<sup>th</sup>, 2020 | 10 am to 12 pm

TOPICS TO BE COVERED

Bones & Joints of Wrist & Hand	Mechanism of Wrist Movements	Muscles of Wrist & Hand
Flexor & Extensor Mechanism of Hand	Hand Prehensions & Arches of Hand	

INSTRUCTOR  
Dr. Amit Sharma

TO REGISTER (FREE)  
[rku.ac.in/events/sptwebinar](http://rku.ac.in/events/sptwebinar)

For more details, contact: +91 9712489122 | +91 9925714450 | [inquiry1@rku.ac.in](mailto:inquiry1@rku.ac.in)

**RKUNIVERSITY** **SCHOOL OF PHYSIOTHERAPY**

A free webinar on  
**Understanding Attention Deficit Hyperactivity Disorder (ADHD) in Kids**  
25<sup>th</sup> May, 2020 | 4 PM to 6 PM

KEY LEARNING

- Introduction of ADHD in kids
- How to assess a child with ADHD
- Management strategies for ADHD

WHO SHOULD ATTEND?  
Physiotherapy students, Clinicians, Academicians, Medics

INSTRUCTOR  
Dr. Rima Jant, MPT in Pediatric Sciences, Alumna, SPT, RKU

TO REGISTER (FREE) [rku.ac.in/events/sptwebinar5](http://rku.ac.in/events/sptwebinar5)  
(E-certificate will be provided to registered participants)

For more details, contact: 9898141466 | [krupa.rath@rku.ac.in](mailto:krupa.rath@rku.ac.in)

**RKUNIVERSITY** **SCHOOL OF PHYSIOTHERAPY**

A webinar on  
**PERIODIZATION FOR CRICKETERS & ATHLETES**  
6<sup>th</sup> June, 2020 | 12:00 pm

TOPICS

- To understand the changes in Sports Physiotherapy during COVID 19
- To learn the scopes of Tele-Rehab and follow up by using Periodization
- To design innovative exercise prescription for the systematic progression as per the need of cricketers / athletes

INSTRUCTOR  
Dr. Avinash Kumar Boyat, MPT, Ph.D. Scholar, Director & Co-founder of AS&C

TO REGISTER (FREE)  
[rku.ac.in/events/sptwebinar4](http://rku.ac.in/events/sptwebinar4)  
(E-Certificate will be provided to all participants)

ELIGIBILITY: Physiotherapists, Medics

FOR MORE DETAILS, CONTACT  
Dr. Chirag Solanki  
+91 9714054600 | [Chirag.solanki@rku.ac.in](mailto:Chirag.solanki@rku.ac.in)

**RKUNIVERSITY** **SCHOOL OF PHYSIOTHERAPY**

A free webinar on  
**HOW TO BE CONSISTENT & BE THE BEST**

- How to deal with post lockdown effects?
- How to relax and rejuvenate?
- A little effort to make your life interesting and optimum.

14<sup>th</sup> May, 2020 | 10:00 am

INSTRUCTOR  
Dr. Krupa Tank

TO REGISTER (FREE)  
[rku.ac.in/events/sptwebinar3](http://rku.ac.in/events/sptwebinar3)

ELIGIBILITY  
Higher Secondary and College Students

For more details, contact  
+91 9712489122 | +91 9925714450 | [inquiry1@rku.ac.in](mailto:inquiry1@rku.ac.in)

**RKUNIVERSITY** **SCHOOL OF PHYSIOTHERAPY**

A free webinar on  
**BOOSTING PRODUCTIVITY IN STUDY BY FITNESS!**  
18<sup>th</sup> May, 2020 | 11:30 am to 12:30 pm

KEY LEARNING

- How fitness improves productivity & brain function?
- Effect of physical activity on academic performance
- Different ways of being fit

WHO SHOULD ATTEND?  
Students of 11<sup>th</sup>, 12<sup>th</sup> & college students of any stream

INSTRUCTOR  
Dr. Shweta Rakholiya

TO REGISTER (FREE)  
[rku.ac.in/events/sptwebinar2](http://rku.ac.in/events/sptwebinar2)

For more details, contact:  
+91 9724779333 | +91 9712489122  
[shweta.rakholiya@rku.ac.in](mailto:shweta.rakholiya@rku.ac.in)

**RKUNIVERSITY** **SCHOOL OF PHYSIOTHERAPY**

A free webinar on  
**PRODUCTIVITY & POSITIVITY**  
by  
Mrs. Komal Baxi  
KCI Certified Psychologist

Date: 5<sup>th</sup> May 2020 | Time: 5:00 PM

This webinar is designed to manage your mind "Outside in" and to change your perspective by understanding. Following areas will be focused in the webinar

- Cognitive filters
- Psychological neural pathway of habits
- Your mood and science behind it

TO REGISTER (FREE): [rku.ac.in/events/sptwebinar1](http://rku.ac.in/events/sptwebinar1)

For more details, contact:  
+91 9724779333 | +91 9712489122 | [shweta.rakholiya@rku.ac.in](mailto:shweta.rakholiya@rku.ac.in)

# PHYSIOFEST - 2020





## Summary Report on Physiofest 2020

### 11<sup>th</sup> National Level Physiotherapy Summit held at School of Physiotherapy, RK University on 4<sup>th</sup> January, 2020

## “Movement for Life”

Shri Shamjibhai Harjibhai Talaviya Charitable (SHTC) Trust managed School of Physiotherapy, RK University (RKU) organized 11th National level Physiotherapy summit to Provide a platform to the students to showcase their practical skills. Physiofest is organized every year in which students / professionals from across the country participate.

Physiofest 2020 was the 11th edition of the national summit scheduled on 4th January 2020. This year the theme of the summit was “Movement For Life”. The event was inaugurated in devine presence of Exceutive Vice President Mr. Denish Patel & Registrar Shri Shivilal Ramani. More than 400 participants from more than 20 colleges across the nation, had represented in this summit. Delegates had participated in various activities & competitions. Along with academic activities like Platform paper presentation, Poster presentation, Academic excellence award 2020, Innovative model exhibition, delegates had also participated in various cultural events like Rangoli competition, Facial paintings, Dancing, etc.

Pre conference workshops and Post conference workshops were also organized in physiofest 2020 respectively on 3rd and 5th January 2020. Hands on workshop on Mulligan mobilization, Workshop on Electrocardiogram and Hands on workshop on Muscle energy techniques(MET) were organized.

On the day of summit, Dr. AGK Sinha (Professor, Punjabi university, Patiyala) and Dr. Yagna Shukla (GSCPT Councilor) were key note speakers. Chief Guest Dr. Arjun sinh Rana (vice chancellor, swarnim Gujarat cricket association) sent a written message as he was unable to be present physically.

As per every year, Physiofest 2020 has released ISBN approved annually published Physiotherapy newsletter Physioforum which includes achievements of School of Physiotherapy, various activities at SOPT like hands on workshop, seminar, community camp, research activities and project work by students, articles of delegates who have presented in Physiofest.

On successful conduct of the the event Physiofest 2020, President Shri Khodidas Bhai Patel and Director Dr. Priyanshu Rathod, Deputy Director Dr. Amit Sharma from RK University congratulated all the faculties and students for their effort and for the successful event.

Case prize had given to the winners by Dr. Ankit Katharani at HI-Tech Physiotherapy & Fitness Factory, Dr. Mahesh Dabhi at 7 Plus Child Physiotherapy Clinic, Dr. Shailesh Kagathara at Prayas Physiotherapy Centre, Dr. Chirag Magdani at Shivechha Rehabilitation Centre.

## PAPER PLATFORM PRESENTATION WINNERS (UG)

### CARDIOVASCULAR & PULMONARY DISORDERS

Janvee J. Baldaniya

#### TOPIC

Effectiveness of high frequency chest wall oscillation (HFCWO) for airway clearance

#### BACKGROUND

HFCWO is standard treatment for airway clearance. It delivers intermittent positive pressure airflow in to the jacket which helps to mobilize the secretion.

#### METHOD

Evidences were reviewed from search articles from pubmed, BMC, google scholar and others.

#### CONCLUSION

This technique provides an improvement in pulmonary function and improvement in quality of life related parameters by removing of secretion.

#### CLINICAL SIGNIFICANCE

HFCWO is widely use treatment where it is considered as alternative to PD&P. It helps to decreases viscoelasticity of mucus and increases ciliary movement which helps to movement of secretion towards mouth.

### WOMEN'S HEALTH

Hemangiba Parmar

#### TOPIC

Effect Of Physical Therapy On Endometriosis.

#### BACKGROUND

Endometriosis is a benign estrogen-dependent gynecological disease which is characterized by the growth of endometrial tissue outside the uterine cavity.

#### AIM

The aim of the study is to evaluate the evidences that manifest the effectuality of physical therapy on endometriosis.

#### METHOD

The articles were searched from Pubmed database, endomertriosis.org, Physiology.org, Research Gate. This study includes systemic review and meta-analysis for the efficiency of physical therapy in endometriosis. Outcome Measures: pain management, pelvic floor, quality of life.

#### CONCLUSIONS

From the evidences it can be concluded that physical therapy has an affirmative response in disease like endometriosis. It reduces the edometriotic lesions, inflammatory response and pain and improves quality of life.

Keywords: Endometriosis, Physical Therapy, Quality of life.

### NEUROLOGICAL & PEDIATRIC DISORDERS

Payal Patodiya

#### TOPIC

to find out efficacy of modified constraint-induced movement therapy (mcimt) in tratment of hemiplegic stroke patient.

#### AIMS

To investigate efficacy of modified constraint induced movement therapy in hemiparetic patient.

#### BACKGROUND

mCIMT: Modified Constraint-Induced Movement Therapy (mCIMT) is an intervention used to improve functionality and mobility in the more affected upper extremity post-stroke. It is used as an alternative to the original constraint-induced movement therapy limitations.

#### EFFECTS

Modified Constraint-induced movement therapy (mCIMT) promotes movement of upper extremities affected by paralytic stroke. The major components of mCIMT include intense repetitive (task-oriented) training and behavioral shaping of the impaired limb with immobilization of the unimpaired arm.

#### CONCLUSION

mCIMT is effective in improving the motor function of stroke patient.

### MUSCULOSKELETAL AND SPORTS DISORDERS

Pratik Chandarana

#### TOPIC

Prevalence of upper crossed syndrome in college going students – an observational study

#### BACKGROUND

Upper crossed syndrome refers to overactive and underactive muscles group in the neck and shoulder girdle. Our aim is to check the tightness and weakness of neck and scapular muscles.

#### METHOD

Tightness for neck extensors & pectoralis major and minor was assessed with measure tape for 140 adults with age group between 17-23 years were randomly selected for the study.Strength for neck flexors & scapular retractors were measured with hand held dynamometer.

#### CONCULSION

Upper cross syndrome is found to be prevalent in college going students.



**ORTHO**

Shivani Chauhan

**TOPIC**

Impact Of Body Mass Index On Cognitive Function Among Young Adults

**OBJECTIVE**

The aim of study was to find out impact of Body Mass Index (BMI) on cognitive function among young adults.

**METHOD**

300 subjects were selected for study. After that BMI was calculated and subjects were divided into 2 groups. Group A (normal BMI) and Group B (overweight/obese (OW/O)). All the subjects were asked to performed Ray verbal auditory learning test (RVALT), Stroop test and Trail making test A and test B.

**STATISTICAL ANALYSIS**

Unpaired t test was used to found significant difference in cognitive functions among 2 groups.

**RESULT**

It was found that cognition score obtained by normal BMI group was higher than score obtained by OW/O

**ORTHO**

Harshini Kapadiya

**TOPIC**

Reliability And Validity Of Smartphone Based Range Of Motion Application

**BACKGROUND**

Smartphones equipped with mobile applications are specifically designed to measure range of motion (ROM).

**OBJECTIVE**

Objective of this study was to assess the intra-rater and inter-rater reliability of DrGoniometer application for ROM of various joints and compare its validity with universal goniometer.

**METHODOLOGY**

100 samples were taken and three assessors trained in measuring ROM and recorder collected the data. Readings of each participant were taken on two successive days to check inter-rater and intra-rater reliability.

**RESULT**

Pearson's correlation coefficient test was used to analyze reliability and concurrent validity.

**CONCLUSION**

Excellent intra-rater and inter-rater reliability was found for DrGoniometer application. Validity of DrGoniometer when compared to Universal Goniometer was excellent for all joints.

**CARDIO**

Mansi Gadhvi

**TOPIC**

Exercises After Median Sternotomy: An Evidence Based Study.

**PURPOSE OF STUDY**

To provide evidence on early mobilization of upper limb to improve quality of life after median sternotomy.

**BACKGROUND**

The median sternotomy (MS) is considered the gold standard incision for cardiac surgical procedures the purpose of this article is to present an overview of current research and commentary on median sternotomy procedures and activity restrictions.

**METHODOLOGY**

Studies that are included are randomized controlled trial, literature review, cross sectional. Relevant articles were searched from the search engines like PubMed, Google scholar. Studies from last 15 years were gathered and compiled for evidences.

**CLINICAL SIGNIFICANCE**

Evidence based exercise prescription for patient following median sternotomy will be useful to reduce complication and improve quality of life.

**WOMEN'S HEALTH**

Khushali ajani

**TOPIC**

An analysis of effect of aerobic exercise combined with music on cognitive ability in postmenopausal women: a randomized control trial

**BACKGROUND**

Cognitive abilities decline is common problem after menopause due to hormonal changes. One of the brain's master regulatory systems is the estrogen receptor network.

**AIM**

Aim of this study is to evaluate the effect of aerobic exercise with music on cognitive ability in postmenopausal women.

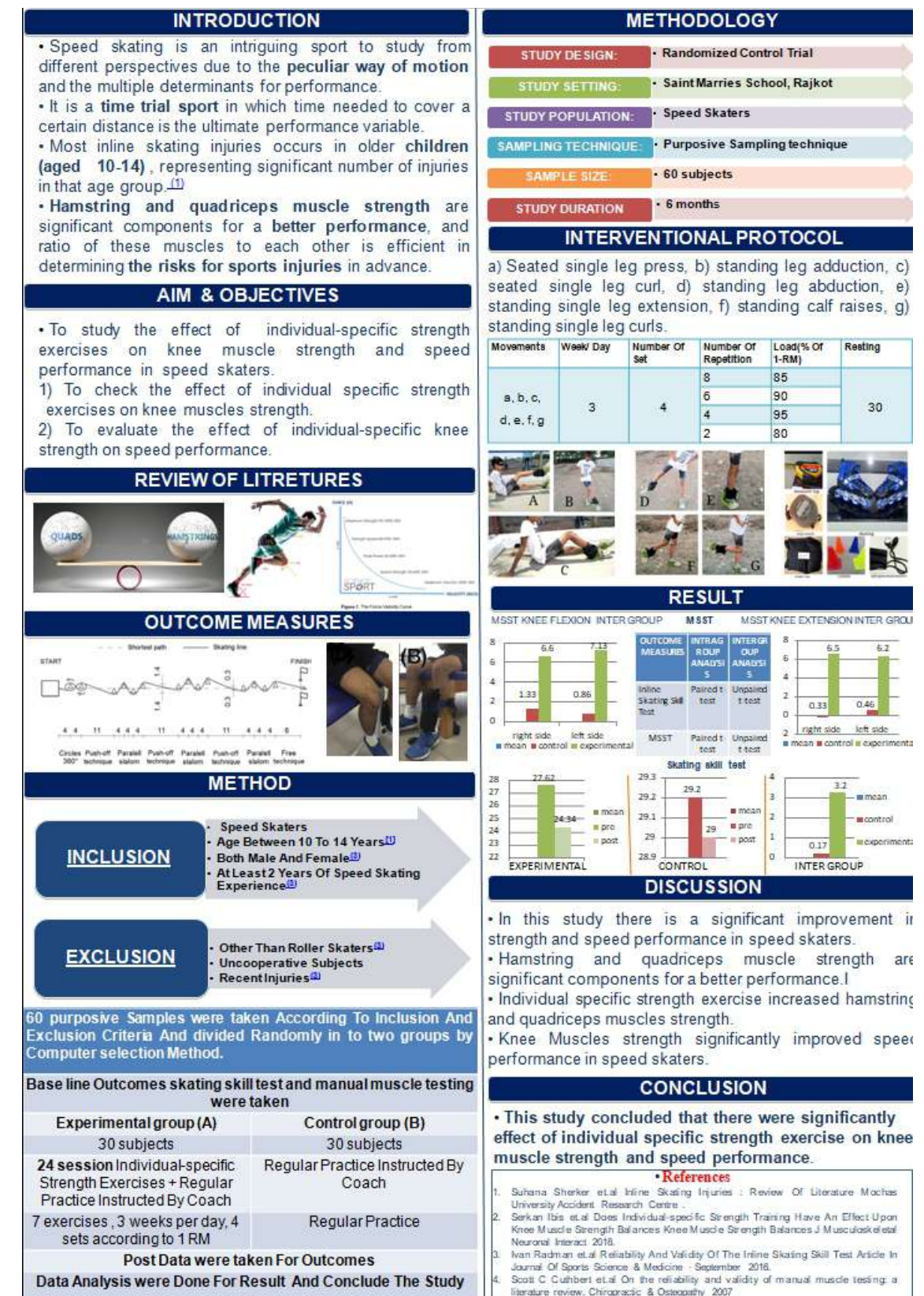
**METHODOLOGY**

100 postmenopausal women were taken as a sample of the study. Then divided into two groups using computer generated sequences. a baseline measurement for menopause rating scale and mental state examination were taken. group a were given aerobic exercise with music for three sessions per week for 6 weeks and group b were not given any treatment (control group).

**CONCLUSION**

The study concluded that the aerobic exercise with music is effective in improving the cognition and quality of life by reducing menopausal symptoms.

## EFFECTS OF INDIVIDUAL-SPECIFIC STRENGTH EXERCISES ON KNEE MUSCLE STRENGTH AND SPEED PERFORMANCE IN SPEED SKATERS: A RANDOMIZED CONTROL TRIAL





## MODIFIED CONSTRAINT-INDUCED MOVEMENT THERAPY IN HEMIPLEGIC STROKE PATIENT

### INTRODUCTION<sup>[1]</sup>

- **CIMT** : It involves the **restraint of the individual's less impaired upper extremity** with use of a safety mitt for 90% of the individuals waking hours.
- **mCIMT** : Modified Constraint-Induced Movement Therapy (mCIMT) is an intervention used to **improve functionality and mobility** in the more affected upper extremity post-stroke by the **restraint of the individual's less impaired upper extremity** with use of a safety mitt for minimum 5 hours a day.
- It is used as an alternative to the original constraint-induced movement therapy limitations.
- **Stroke**: sudden death of brain cells due to lack of oxygen, caused by blockage of blood flow or rupture of an artery to the brain.
- **Hemiplegia** : paralysis of muscles of lower face, arm and leg on one side of the body.

### MITT IN mCIMT<sup>[2]</sup>

**Constraint mitt** : use on the unaffected side. it is **lightweight glove** that fits on your hand and wrist.



### Why mCIMT, not CIMT??<sup>[1]</sup>

mCIMT protocols include

- **Less clinical treatment time** with therapists
- **Less time to constraint** non affected or less affected limb
- **home-based practice with lesser time** than the CIMT using the more affected upper extremity functionally and during activities of daily living.
- mCIMT includes a **distributed practice schedule**, whereas CIMT includes massed practice.

### GOALS<sup>[2]</sup>

- To facilitate more spontaneous use of affected extremity.
- Improve **quality** of upper extremity **function**.
- Increase **overall functional use** of affected extremity.
- Improve **quality of life skills**.
- To address learned movements in non-use and decreased motor function in an upper extremity affected by post stroke/CVA

### METHOD<sup>[2]</sup>

- in these therapy patient is using their more affected upper extremity for everyday activities while the **less affected upper extremity is placed in constraint**.
- the patient performs **gross motor tasks, fine motor tasks, and ADLs** during the treatment time.
- Facilitate overall performance in **daily living skills, work related tasks, school activities and social participation**.

### WHO MAY BENEFIT FROM mCIMT??<sup>[1]</sup>

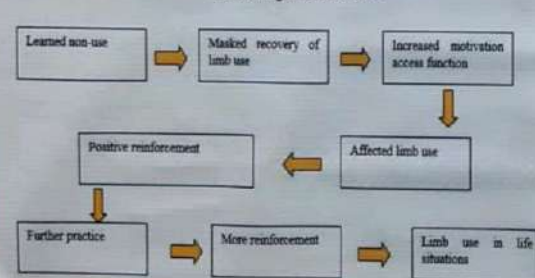
- Children with a **clinical presentation of upper extremity hemiplegia** who can initiate and move upper extremity.
- Children who are **able to follow directions and work in intensive therapy**.
- Children whose parents are **able to dedicate time to the program**.

### CRITERIA<sup>[1][4]</sup>

- 20 degree of active wrist extension
- 10 degree thumb abduction and extension
- 10 degree of active finger extension
- This movements had to be repeated 3 times per minute

### MECHANISM<sup>[1]</sup>

Overcoming learned non-use



### COMPONENTS OF MCIMT<sup>[1]</sup>

Three fundamental components :

- 1 Restraint of the less impaired upper extremity, using a mitt.
- 2 Repetitive Task Practice.
- 3 Application of behavioral techniques :

- Shaping involves **matching the difficulty of tasks performed** to improvements the patients makes, and **providing encouraging feedback immediately after any gain in function**.
- Shaping tasks are determined by therapists based on: **individual movement deficits at specific joints**, joint movements that, in the therapists opinion, has the most potential for improvement, and patient preference of specific tasks that would produce the movements above.
- With shaping, **progression of movement tasks** is made in a systematic, quantified, and parametric way on tasks that are individualized for the patient. This makes the intervention **time-specific and meaningful to the patient**, as well as positive - as **feedback is always positive and encouraging, very rarely negative**.

### TIMING OF THE APPLIED MCIMT<sup>[1]</sup>

- Early studies described structured sessions of functional, task-specific practice that **lasts 30 minutes with 5 hours of the constraint of the less affected side, for 5 days a week for 10 weeks**.
- While, a 2011 meta-analysis and review of mCIMT included modified approaches with **less than 6 hours of constraint a day, intensive therapy that ranged from 30 minutes to 3 hours a day, and intervention periods ranging from 2 to 10 weeks(14 to 70 days)**.
- A second comprehensive meta-analysis outlines mCIMT therapy sessions performed for **30 minutes at a time, 3 times per week, over a 10 week period**.

### EFFECTS<sup>[1]</sup>

- promotes movement of upper extremities affected by paralytic stroke.
- intense repetitive (task-oriented) training and behavioral shaping of the impaired limb with immobilization of the unimpaired arm.
- Cortical recognition
- Dendrite branching
- Redundancy learned
- Synaptic strength

### INDICATIONS<sup>[1]</sup>

- Post stroke patient(who require some hand function, high motivation, minimal cognitive dysfunction, adequate balance)
- Traumatic brain injury
- Spinal cord injury
- Multiple sclerosis
- Cerebral palsy in form of hemiplegia

### CONTRAINDICATIONS<sup>[1]</sup>

- Pain
- Burns
- Skin lesions
- Muscle soreness
- Shoulder pain in acute phase

### OUTCOME MEASURES<sup>[4]</sup>

- Measures of disability functional independence measure(FIM) Barthel Index(BI)
- Measures of motor function Action reach arm test(ARAT) Arm mobility ability test(AMAT) The box and block test(BBT)
- Measure of quality of life Stroke impact scale(SIS)
- Measures of arm motor impairment Fugl meyer assessment(FMA) Hand strength

### CONCLUSION

- modified constraint induced movement therapy is effective in hemiplegic stroke patient as it improve in motor functions, quality of daily function and quality of life in hemiplegic stroke patients.

### REFERENCES

- 1 Alyssa whelan: mCIMT, Physiopeia, mCIMT
- 2 Constraint mittten, by odstock medical ltd
- 3 memorialhermann, mCIMT
- 4 Gert kwakkel, janne mM, Veerbeek: constraint induced movement therapy after stroke, 2015 February 14(2):224-234 published in final edition of lancet neurol

## LIST OF WINNERS OF PHYSIOFEST 2020

Event	Winners	Runner Up
INNOVATIVE MODEL EXHIBITION	Divyam Thakkar, Theera Vitthlani	Mahima Gor, Bhoomika Rathod
QUIZ COMPETITION	Tirth Patel, Salman Rashiyani, Monil Patel	Jaydip Bhadja, Madhav Dave, Hitesh Parmar
ACADEMIC EXCELLENCE AWARD (UG)	Hitesh Parmar	NA
ACADEMIC EXCELLENCE AWARD (PG)	Ashna Bhagdev	NA
POSTER PRESENTATION (UG)	Payal Patodiya	Ekta Nagla
POSTER PRESENTATION (PG)	Akshay Kacha	Harshad Morasiya
CULTURAL COMPETITION	Urvashi Nimavat, Mansi Pandya, Priyanka Jadeja	Hemal Patel, Hemangiba Parmar
FACE PAINTING COMPETITION	Neha Savaliya	Bhavya Rabadiya
RANGOLI COMPETITION	Jahanvi Ghaghada, Hasti Chudasama, Khushbu Trivedi, Kamali Chauhan	Nirali Koradiya, Hitesh Sidhpara, Ghanshyam Ghodakiya, Grishma Manek

## ICOSTART'19

RK University organized ICOSTART 2019 - A two-day international research conference and summit on Innovations, Startups and Investments with capacity building workshops by INTUIT and Ulster University, UK. Besides India, the conference attracted speakers and participants from Australia, Bulgaria, Philippines, Ireland, Sri Lanka and China.



Shivani Vyas  
UG student  
School of Physiotherapy,  
RK University



Dr Urvi Pithwa  
PG student,  
School of Physiotherapy,  
RK University

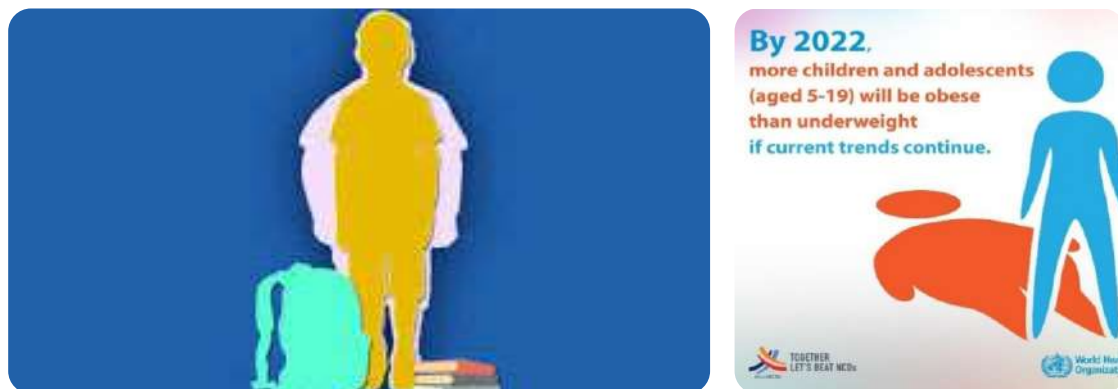


Dr Amit Sharma (MPT, MIAP)  
Deputy Director,  
School of Physiotherapy,  
RK University



## Adolescent Obesity: Let's move and catch it... !!!

Adolescent obesity has acquired widespread proportions and is being perceived as a catastrophe in public health, World-wide. The prevalence is increasing at a fast rate and presently, about 200 million school-aged children are estimated to be overweight at the global level. (Malhotra, 2014) According to WHO 2017 report, there is a wide range of prevalence of overweight and obesity worldwide, ranging from India, where only 0.7% of the population is obese, to French Polynesia, where nearly 40% of the population is obese. (Mahfouz et al., 2011)



Adolescent obesity is closely linked to an increased risk of the premature onset of chronic diseases. The most common conditions associated with obesity are insulin resistance, diabetes mellitus, hypertension, dyslipidemia, cardiovascular disease, sleep apnea, other respiratory dysfunctions, and certain cancers. In particular, it is associated with behavioral and emotional problems, such as anxiety and depression. Low self-esteem and self-confidence are massively overrepresented in this group of children and many children experience social marginalization because of their physical appearance and physical limitations. In many children, being overweight is a direct reason for not being able to participate in activities with their peers. (Warner, 2019)

The International Association for the Study of Obesity (IASO) and International Obesity Task Force (IOTF) estimate that 200 million school children are either overweight or obese. Which is increasing over the period of time. Studies conducted on adolescent obesity suggest that it may be plateauing off in some developed countries, while sharp increases continue to occur in developing countries. For adolescents, overweight and obesity are usually defined using age and gender specific nomograms of BMI. (Ranjani et al., 2016)

The adolescent period of human life is one of the vital times when most of the body growth and development occur. Preparation for adulthood like physical, sexual, and psychological growth and development takes place in this period. Nearly 35% of the global burden of disease has its root beginning in adolescence. Obesity in adolescents is found to have association with the occurrence of various lifestyle diseases such as diabetes, hypertension, dyslipidemia, osteoarthritis, during adulthood. (Prasad et al., 2016)

Obesity is now considered a major modifiable risk factor for cardiovascular disease and is strongly associated with comorbid conditions such as insulin resistance, type 2 diabetes mellitus, coronary artery disease, hypertension, stroke and heart failure. (Watts, Jones, Davis, & Green, 2005)

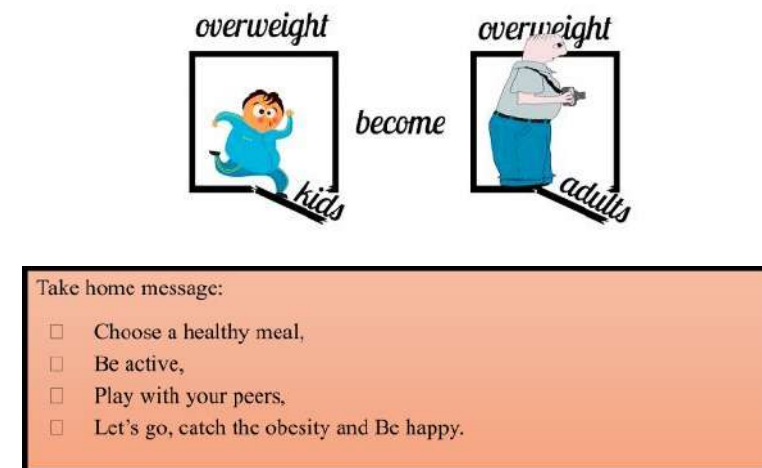
Obesity is a complex condition that results from a combination of biological, social, environmental and behavioral factors. The food and activity choices of individuals are influenced convincingly by the toxic and obesogenic environment in which they live. Constant marketing of unhealthy food, rarity of safe areas for physical activity and easy availability of junk food make it difficult for them to opt for healthy choices. (Inchley et al., 2017) Excessive food intake and lack of physical activity are major contributors to obesity. (Frederick, Snellman, & Putnam, 2014)

Let's discuss some trending contributors for adolescent obesity, starting with Poor Eating Habits. It is an important contributor to overweight and obesity among adolescents. Young people across globe consume high levels of fast food and sugar-sweetened beverages and spend less time eating family meals as compare to previous generations. Consumption of products high in free sugars may also reduce intake of healthier, less energy-dense options. On the other hand Physical activity levels are generally very low in young people in all countries and are lower among girls. Physical activity is a key determinant of energy expenditure, as it has a fundamental positive influence on energy balance and weight control.

Regular physical activity in children and adolescents is important for obesity prevention. (Inchley et al., 2017)

While modern life has reduced energy expenditure through physical activity to a minimum, sedentary behaviours dominate adolescents' daily lives. Young people spend approximately 60% of their time everyday in sitting, which makes Sedentary Behaviour the most common behaviour (besides sleep) in adolescents. The steepest increase in sedentary behaviour occurs around 11 to 13 years, during the onset of puberty. (Inchley et al., 2017)

The Health Behaviour in School-aged Children (HBSC) survey is a WHO collaborative cross-national study that monitors the health behaviours, health outcomes and social environments of boys and girls aged 11 and 15 years every four years. This study observed Socioeconomic Differences among obese adolescent and concluded that Obesity and its lifestyle risk factors are typically more common in lower socioeconomic groups. (Inchley et al., 2017) Adolescent obesity is closely linked to an increased risk of the premature onset of chronic diseases. The most common conditions associated with obesity are insulin resistance, diabetes mellitus, hypertension, dyslipidemia, cardiovascular disease, sleep apnea, other respiratory dysfunctions, and certain cancers. In particular, it is associated with behavioral and emotional problems, such as anxiety and depression. Low self-esteem and self-confidence are massively overrepresented in this group of children and many children experience social marginalization because of their physical appearance and physical limitations. In many children, being overweight is a direct reason for not being able to participate in activities with their peers. (Warner, 2019)



Adolescent obesity can be caught by multiple treatment options. Among them healthy eating, activity with minimal use of highly restrictive diets or medication and counseling is recommended by Pediatricians, Pediatric Nurse Practitioners and Registered Dietitians to control the weight. (Barlow, Trowbridge, Klish, & Dietz, 2002)

In 2019, recently Tine Warner has analysed the Comorbidities and effects of High-Intensity Interval Training (HIIT) supplementary to treatment and concluded that There is an association between obesity and nocturia and being obese nearly doubles the risk of having nocturia. Combining best-practice multidisciplinary treatment with HIIT produces positive effects on BMI, BMI-SDS, abdominal circumference and cardiorespiratory fitness, the latter two significantly more than Moderate-Intensity Interval Training (MICT), when comparing the two treatment modalities. (Warner, 2019)

A review conducted for the exercise training for adolescent obesity suggested that exercise training beneficially modifies body composition, without changes in bodyweight or BMI. It is also associated with increases in cardiovascular fitness and muscular strength; however, it seems to have little effect on blood lipid profile and blood pressure. (Watts et al., 2005)

Overall treatment regime for adolescent obesity prevention and reduction includes Dietary modification, physical activity (Aerobic exercises, resisted exercises, Cardiac endurance exercise, outdoor sports activities etc.), Counseling, awareness among parents and children and encouragement.

- Dr Krupa Tank  
Assistant Professor,  
School of Physiotherapy,  
RK University





**Dr. Rima Jani (PT)**  
Assistant Professor  
Shree Bharatimaiya College Of  
Optometry and Physiotherapy, Surat, Gujarat  
Batch : 2014-16



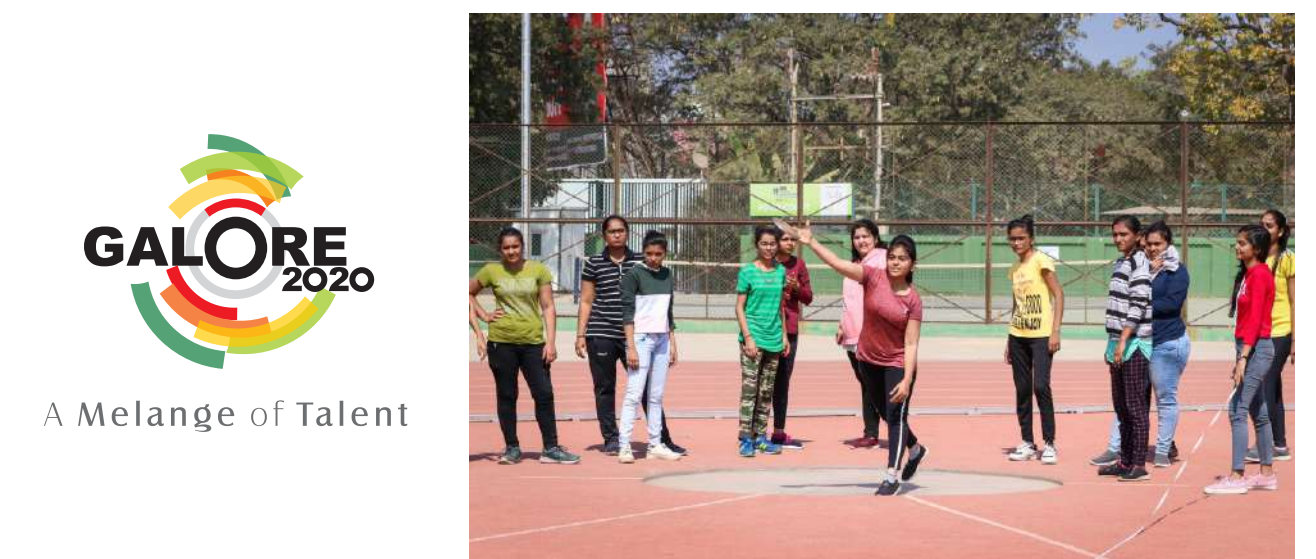
**Dr. Namrata Mashrani**  
Senior Team Leader, (services- Fitness)  
Healthifyme Application  
Healthifyme Well ness Private Limited,  
Bengaluru, Karnataka  
Batch: 2014-2015



**Dr. Mahesh Dabhi**  
Consultant physiotherapist (HOD)  
7 plus child physiotherapy clinic, Morbi  
Batch: 2012-2016



**Dr. Mixu Thakkar**  
HCA Healthcare Australia  
Senior Physiotherapist  
Batch: 2012- 2016







BPT BATCH 2016-20



BPT BATCH 2017-21



BPT BATCH 2018-22



MPT BATCH 2018-20



MPT BATCH 2019-21