Dr. Madhanagopal Jagannathan MPT (Geriatrics), PGD (Gerontology), PhD Associate Professor, Department of Physical Therapy, Faculty of Allied Medical Sciences, Philadelphia University, Jordan Phone: +962785302488; E-mail: mjagannathan@philadelphia.edu.jo Google Scholar: https://scholar.google.com.my/citations?user=mmWmA-4AAAAJ&hl=en



Objective: To provide high quality evidence-based practice to patients and outcome-based education to the student community.

EXPERIENCE

SEPTEMBER 2022- TILL DATE

- Associate Professor: Department of Physiotherapy, Faculty of Allied Medical Sciences, Philadelphia University, Amman, Jordan.
- ✓ Faculty Chair for International relations and Projects

AUGUST 2021 – SEPTEMBER 2022

- Consultant Geriatric Physiotherapy Specialist: Healthy Ageing Physiotherapy & Research Centre, Karamadai & Melur Meadows Active Retirement Village, Kumaram Kundru, Mettupalayam.
- ✓ Conducting SLIM (Save Lives, Injuries and Money) program for older adults in partnership with Melur Meadows Active Retirement Village.
- Resource Person for Postgraduate Diploma in Geriatric Care and Management program, Department of Social Work, Bharathiar Univesity, Coimbatore.
- Co-investigator for Glue Grant Research Project with Department of Nanoscience and Technology, Bharathiar Univesity, Coimbatore.

JUNE 2018 – JUNE 2021: Senior Lecturer and SEP 2018 to NOV 2020: Deputy Dean, School of Physiotherapy, Faculty of Allied Health Professions, AIMST University, Malaysia

- ✓ Development of Outcome Based Education curriculum for Bachelor of Physiotherapy and Master of Physiotherapy (Musculoskeletal Physiotherapy) Programme.
- New Programme Development: Master of Physiotherapy (Musculoskeletal Physiotherapy), and PhD (Rehabilitation Science)
- ✓ Member of Senate, Board of Postgraduate Studies, Academic Quality Assurance and Curriculum Committee, Faculty Quality Assurance and Curriculum Committee.
- ✓ Deliver Lecture, Tutorial and Practical on the courses Research Methodology, Geriatric Physiotherapy and Exercise Therapy.
- ✓ Co-ordinating the Accreditation visit for the programmes of the School of Physiotherapy.
- Preparation of programme curriculum documents and persuade the Malaysian Quality Assurance committee.
- ✓ Organizing webinars/workshops/conferences, Research collaboration and acquiring research grants.
- ✓ Supervised 11 Bachelor degree and currently co-supervising 1 PhD.

DEC 2008-JAN 2014

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Lecturer and Examination Coordinator, School of Physiotherapy Faculty of Allied Health Professions, AIMST University, Malaysia

- Prepare, deliver and conduct lecture, tutorials, practical and exam question paper on the courses Electrotherapy, Biomechanics and Kinesiology, Geriatric Physiotherapy, Exercise Therapy, Counseling Skills, Cardio-respiratory Physiotherapy and Research Methodology.
- ✓ Teach, supervise and conduct clinical exam for the students during their clinical placement in hospitals.
- ✓ Batch 2, 9 coordinator, Exam coordinator for school of physiotherapy for 3 years and experience in preparation of BPT and Diploma syllabus.
- ✓ Clinical Instructor for Physiotherapy in Hospital Sultana Bahiyah, Alor setar, Kedah, Malaysia from April 2011- April 2013.

SEP 2006-NOV 20008

Assistant Professor, Meenakshi College of Physiotherapy & Hospital, Chennai

- Deliver Lecture and Practical on the course Clinical problems of elderly Assessment and diagnosis of elderly, Management of elderly, Physiotherapy Ethics and Education and Research Methodology for BPT and MPT programmes.
- ✓ Supervised 6 MPT (Geriatrics) and 4 BPT projects during the tenure.
- Assess and treat patients in the Physiotherapy clinic with Geriatric, Neurology, Orthopedics, Cardiac & Pulmonary, Pediatrics, Hand, Orthotic & Prosthetic units and Community Care.
- ✓ Trained in task-oriented approach to retrain balance and mobility, Fall prevention program, palliative care, Maitland technique.
- ✓ Physical therapy assessment, documenting and maintaining case record.
- Management of patients in both IN and OUT-patient departments in the Geriatrics, Orthopedics, Neurology, Pediatrics, Rheumatology, Cardio-Thoracic, Coronary care unit and Intensive care unit on rotational basis.
- ✓ Organizing camps, case presentations and continuous Physiotherapy education programs and group discussions.
- ✓ Involved in pre-treatment discussions with the Rehabilitation team to acquire knowledge about the intricacies of different clinical conditions.
- ✓ Evidence and holistic based clinical practices.

SEP 2004-AUG 2006 (PART-TIME)

Geriatric Physiotherapist, Adhiparasakthi Geriatric Health Centre, Chennai

 Assessment and Treatment of Elderly patients with fall, urinary incontinence, pressure ulcer, depression, osteoporosis, sarcopenia, bed ridden complications, neck of femur fracture, osteoarthritis, and palliative care.

AUG 2003-AUG 2004 (FULL-TIME)

Geriatric Physiotherapist, Adhiparasakthi Geriatric Health Centre, Chennai

 Assessment and treatment of elderly patients with fall, urinary incontinence, pressure ulcer, depression, osteoporosis, sarcopenia, bed ridden complications, neck of femur fracture, osteoarthritis, and palliative care.

EDUCATIONAL QUALIFICATION

FEB 2014-JAN 2018

PhD in Health Science, Faculty of Biomedical Engineering and Health Science, University Teknologi Malaysia, QS Ranking:187.

AUG 2004-AUG 2006

MPT (Geriatrics) with PG Diploma in Gerontology, MAHER University (Meenakshi University), Chennai, Tamil Nadu, India.

OCT 1998-JUN 2003

BPT, Meenakshi College of Physiotherapy Chennai, The Tamil Nadu Dr. MGR Medical University, Chennai, India.

CREDITS, AWARDS AND MEMBERSHIP

- Successfully completed the "Accreditation and Outcome Based Learning" online course conducted by IIT Kharagpur during Aug-Oct 2019 with Elite+Gold (92%) rank and listed among top 5% participants.
- PhD Thesis Merit Award (2017).
- Best Postgraduate Student Award, UTM (2017).
- Certificate of Excellence (B1 Grade) for PhD Viva-voce (2017).
- International Doctoral Fellowship (2014-2016) (Universiti Teknologi Malaysia).
- Good Clinical Practice (GCP), Ministry of Health, Malaysia, 2013.

- Best work performance Award, AIMST University, 2011.
- Member of the Medical Panel for Geriatric House Call Programme launched by the Senior Citizens Bureau on 17th Feb 2008.
- Indian Association of Physiotherapist Membership, Reg. No: L-17388.
- Certificate of Merit for scoring first mark in Orthopaedics for Physiotherapist at Meenakshi College of Physiotherapy and Hospitals, Chennai, India in 2002.

THESIS TITLE

- > **PhD:** New Intrinsic Hand Muscle Strength Measurement Device using Ketjenblack reinforced Deproteinized Natural Rubber Material.
- Masters: The Effect of Stretching for Hamstring Muscles in Increasing Range of Motion in Elderly People.

RESEARCH GRANTS

S. No	Grant Name		Title	Role	Funding Body and Amount /Year	Status
1.	Acceleration	of	Reliability and	Co-	Bournemouth	Complet
	Research	&	Development of	Investigator	University, UK/	ed
	Networking		Normative Data of the		£5000 (Rs. 5	
	[ACORN]		Total Faulty Breathing		lakhs)/ Feb	
			Scale (TFBS)		2020	

2.	Ashok & Rita Patel Institute of Physiotherapy (ARIP) Research Grant, Gujarat, India	New Index for Fall Risk Prediction among Elderly using Lower Limb Muscle Force Signal	Primary Investigator	CHARUSAT University, India/ Rs. 1.75 Iakhs/Aug 2020	Ongoing
3.	Fundamental Research Grant Scheme (FRGS) Ref: FRGS/1/2020/SKK 04/AIMST/02/1	Depression and Quality of Life among Older Adults Residing at Old Age Homes and Assessment after the Exercise Programme	Co- Investigator	Ministry of Higher Education (MOHE), Malaysia /RM 51,900 (Rs. 9.2 Iakhs)/Oct 2020	Complet ed

PUBLICATIONS

1. Madhanagopal J, Deivasigmani, Computer Aided Automatic Detection of Depression, Stress and Anxiety among University Nursing Students in Malaysia. **Communicated to F1000 Research Journal.**

2. Thengi MM., Timsi J., Madhanagopal J., SawriRajan LRG., Hnin PP., Win MO., (2022), Impact of Aerobic and Strengthening exercises on quality of life, mental health and physical performance of depressed older adults, *Sustainability*, Just accepted Q2< Impact Factor 3.88> SCI Indexed.

3. Bhavani V., Ratnadeep S., **Madhanagopal J., (2022),** Navigating learners' learning style by case based learning mixed modalities to facilitate clinical knowledge construction, *Education In Medicine Journal,* 14 (3); 91-108, **Scopus Indexed**

4. Mohan, V., Branney, J., Clark, C., Neal, R., **Madhanagopal, J**., Paungmali, A., & Perri, M. **(2022).** Reliability and preliminary reference values for the Total Faulty Breathing Scale (TFBS): A cross-sectional study. *Health science reports*, *5*(3), e661. https://doi.org/10.1002/hsr2.661, **Q3< Impact Factor 1.95> SCI Indexed.**

5. Theingi, M., Timsi, J., **Madhanagopal, J.**, Nurhazrina, Binti N., Vincent, Z., Win, O., Sukumaran, S., **(2022)**, Prevalence of depression, stress and anxiety and Impact of exercise on mental health and physical performance among institutionalized older adults of northern Malaysia, Journal of Positive School Psychology, 2022, Vol 6 (5), 6681-6691. **Scopus Indexed.**

6. O.E. Yoong, O.P. Singh, V. Mohan, G. Christina, **J Madhanagopal***, Efficacy of Eye Exercise Regime on Computer Vision Syndrome among Primary School Students and its Estimation of Treatment Outcome using Machine Learning- A Preliminary Study, **Ethiopian Journal of Health Development, Manuscript is under review.**

7. O. P Singh, M. Vallej, I. M. El-Badawy, A. Aysha, **J. Madhanagopal**, & A. A. Mohd Faudzi,. Classification of SARS-CoV-2 and non-SARS-CoV-2 using machine learning algorithms. *Computers in biology and medicine*, 2021, *136*, 104650. Advance online publication. <u>https://doi.org/10.1016/j.compbiomed.2021.104650</u>. **Q1< Impact Factor 4.58> SCI Indexed.**

8. K.P. Chia, O.K. Li, T.S. Yuong, O.P. Singh, A.A.M. Faudzi, S. Sornambikai, J. Madhanagopal* Portable Real-time Force Monitoring Device with Enhanced Accuracy for

Mechanical Neck Pain Treatment, Technology and Health Care Journal, 2021, 29, 4, 829-836. Q3< Impact Factor 1.23> SCI Indexed.

9. J. Madhanagopal, O.P. Singh, M. Vikram, A.H. Omar, K.V. Sathasivam, M.R.A. Kadir, New Intrinsic Hand Muscle Strength Measurement Device- Alternative to Strain Gauge Hand Held Dynamometer. Evaluation & the Health Professions, 2019, 42, 1, 1031-113 Q2< Impact Factor 2.52> SCI Indexed.

10. J. Madhanagopal, O.P. Singh, S. Sornambikai, A.H. Omar, K.V. Sathasivam, S.J. Fatihhi, M.R.A. Kadir, Wide Rage Monotonic Piezoresistivity, Reliability of Ketjenblack/Deproteinized Natural rubber Nanocomposite and its Biomedical Application. J.App.Poly.Sci. 2017, 134,44981 Q1< Impact Factor 3.28> SCI Indexed.

11. M. Vikram, J. Maria, **J. Madhanagopal**, S.B. Aminudin, S.H.B. Johari, Preliminary Study on the Patterns and Physical Risk Factors on the Work Related Musculoskeletal Disorder Among Academicians in Higher Learning Institute. J Orthop Sci 2015, 20 (2), 410-417.Q3< Impact Factor 1.25> SCI Indexed.

12. S. Sornambikai, **J. Madhanagopal**, M.R.A. Kadir, P. Sathishkumar, T. Hadibarata, M.R. Yusoff, A New Electro-generated *o*-dianisidine-enone Derivative Stabilized MWCNT Modified Glassy Carbon Electrode for Electro-analytical Application, RSC Advances 2015, 5 (57), 45996- 46006. **Q1 < Impact Factor 3.07> SCI Indexed.**

13. S. Sundaram, A.S. Kumar, **J.Madhanagopal**, M.R.A. Kadir, In situ Stabilization of Hydroxylamine via Electrochemical Immobilization of 4-nitrophenol on GCE/MWCNT Electrodes: NADH Electrocatalysis at Zero Potential, Anal. Methods 2014, 6(22), 8894-8900, **Q2 <Impact Factor 2.39> SCI Indexed.**

14. J. Madhanagopal*, M. Vikram, J. Blessy, J. Maria, L.H. Joseph, I.R. Othman. Effect of Progressive Resistance Training using 10 Repetition Maximum on Primary Outcomes of Sarcopenia among Older Persons. British Journal of Medical and Health Science. Oct 2013, Vol.1.No.1 pp 74-88.

15. M. Vikram, K. Badlisyah, K. Kamaruddin, L.H. Joseph, D. Srijit, **J. Madhanagopal**. Effect of Intercostal Stretch on Pulmonary Function Parameters among Healthy Males. EXCLI Journal, June 2012;11:284-290. **Q3 < Impact Factor 1.46> SCI Indexed.**

16. J. Maria, T.A.A. Hamid, M. Vikram, **J. Madhanagopal**. Effects of Multicomponent Exercise Training on Physical Functioning Among Institutionalized Elderly. ISRN Rehabilitation, Vol. 2012, Article ID 124916, 7 pages, 2012. Doi: 10.5402/2012/124916 2011. **Pubmed Indexed.**

17. J. Madhanagopal*, Arun, N. Padmapriya, C. Elanchezian, V.S. Natrajan. Effect of strength training using one's own body weight in sarcopenia. Indian Journal of Physiotherapy and occupational therapy. April- June 2009, Vol 3.No.2.

18. N. Padmapriya, **J. Madhanagopal**, Dhineshkumar, C. Elanchezian. Pediatric Functional Evaluation Measure. Indian journal of physiotherapy and occupational therapy. March 2009, Vol. 3, No.1.

Student Name	Title	Level/ Supervision	Status
Theingi Maung	Depression and Quality of Life	PhD/Co-supervisor/	Ongoing
Maung	among Older Adults Residing at	Saveetha University,	
	Old Age Homes and Assessment	India	

STUDENT SUPERVISION IN THE PAST 3 YEARS

	often the Evencies Drogram as a		
	after the Exercise Programme		
Boon Sum Ee & Tan	Development of Ergonomic Pelvic	Bachelor/Main	Completed
Ke Qian	Seater for Posture Training and	Supervisor	
	Low Back Pain Relief: Thera-		
	Saddle.		
Vincent Chung Yi	Role of Lower limb Muscle	Bachelor/Main	Completed
Zhen, Sajidur	Strength in Predicting Fall Risk	Supervisor	
Rahman Bin	among Elderly: Systematic Review		
Habibur Rahman &			
Ling Kheng Yew			
Ooi Kelli	Development of low-cost flexi	Bachelor/ Main	Completed
	force sensor incorporated	Supervisor/AIMST	
	dynamometer for monitoring	University	
	applied force during cervical		
	mobilization		
Steven	Effect of exercise on severity of	Bachelor/ Main	Completed
	symptoms among computer	Supervisor//AIMST	
	vision syndrome patients	University	
Poi Shi Qi	Analysis of agreement of balance	Bachelor/ Main	Completed
	scales in predicting risk of falls	Supervisor//AIMST	
	among older adults	University	
Hehang Jie, Ru Wei,	Prevalence and Risk factors for	Diploma/ Main	Completed
Ooi Zehui,	Depression among Nursing	Supervisor//AIMST	
	Students in AIMST University,	University	
	Malaysia.		

CONTRIBUTION AS EXTERNAL/INTERNAL EXAMINER

Student Name	Title Level		Internal/
		/University	External
Chiranjeevi Jannu	Effect of low-level laser	PhD in	External
	irradiation in the management	Physiotherapy /	
	of diabetic neuropathy induced	Saveetha	
	symptoms and pain	University, India	
Mamunur Rasid	An anthropometric study of	Post-graduate	Internal
	hand and forearm dimensions	(MSc Human	
	of three ethnic groups of young	Anatomy)/ AIMST	
	adults and their correlation with	University,	
	hand grip strength	Malaysia	

COMMUNITY SERVICES/NEWS PAPER/MEDIA

- ✓ Inaugurated an Intergenerational program launched by Department of Social Work, Bharathair University and Helping Hearts, Coimbatore on 29 September 2022 for students of Sociology.
- Healthy Ageing Tamil Nadu Foundation and Rotary club, Sirumugai jointly organized "Fall Risk Screening Awareness Camp" for senior citizens of Sirumugai town on 24 June 2022 between 4pm and 7pm at V. Muthusamy mahal. Covered in Pugazhi Tv and Makkal Kural News paper.
- ✓ Conducted Fall risk screening for the residents of Brindavan Retirement Village, Coimbatore on 7 May 2022.
- ✓ Delivered an awareness talk on health problems of elderly people for Tamil Nadu Pensioner Association -Karamadai branch on 8 March 2022.

EVENTS ORGANISED

- Organized a Workshop on "Stroke Rehabilitation" at AIMST University, Malaysia in 2019 and generated a profit around RM 16,000 (Rs.2.87 lakhs)
- Organized "International E-conference on Biotechnology, Bioinformatics and Biomedicine 2020" as a Scientific Committee Member held during 24th – 26th Aug 2020 at AIMST University, Malaysia.
- Convenor, Co-chair and Judge in the "2nd International Conference on Fostering Interdisciplinary Research in Health Sciences (ICFIRHS) 2019" held at AIMST University, Malaysia.
- Contributed as Sub-committee member in the "5th Convocation ceremony 2012" at AIMST University, Malaysia.

MOU ESTABLISHED

- Initiated and Established MOU between Faculty of Biomedical Engineering, Universiti Teknologi Malaysia and AIMST University.
- Initiated and Established MOU between CHARUSAT UNIVERSITY India and AIMST University.

DEVELOPMENT OF SHORT COURSES

- Developed curriculum and Resource Person for a Short Course entitled "Certificate in Geriatric Care" in 2020.
- Developed curriculum and Resource Person for a Short Course entitled "Certificate in Care Giving (Elderly care)" in 2020.

RESEARCH COLLABORATORS

Dr Vikram Mohan, MPT, PhD, Senior Lecturer – Physiotherapy, Department of Rehabilitation and Sports Sciences, Faculty of Health & Social Sciences, Bournemouth University, UK.

- Assoc. Prof. Dr. Ir. Ahmad'Atif Bin Mohd Faudzi, Director, Centre for Artificial Intelligence and Robotics, (CAIRO), School of Electrical Engineering, Faculty of Engineering, Universiti Teknologi Malaysia.
- Dr. M. Balaganapathy, MPT, PhD, Principal In-charge Ashok & Rita Patel Institute of Physiotherapy (ARIP), at CHARUSAT University, Gujarat, India.
- > Dr. Om Prakash Singh, M.Tech, PhD, School of Chemistry, University of Edinburgh, UK.
- Dr. El-Badawy Ismail, ME, (PhD), Electronics and Communications, Engineering Department, Arab Academy for Science and Technology, Cairo, Egypt.
- Prof.Sazali Bin Yaacob, M.Sc System Engg., PhD, Electrical Electronic and Automation Section, Universiti Kuala Lumpur Malaysian Spanish Institute.
- Dr. Pranesh Krishnan, ME, PhD, Electrical Electronic and Automation Section, Universiti Kuala Lumpur Malaysian Spanish Institute.
- Dr. Christina Gell Knight, MBBS, MS, DNB, DoMS, Sr. Assoc. Prof. Faculty of Medicine, AIMST University, Malaysia.
- Dr. S. Deivasigamani, ME, (PhD), Charted Engineer, Sr. Lecturer, Faculty of Engineering and Computer Technology, AIMST University.
- Dr.S.Sornambikai, M.Sc., Ph.D, Department of Nanoscience and Technology, Bharathiar University, Coimbatore, India.

KEY NOTE SPEAKER

Topic: Geriatric Giants and its evidence based practice in the GERIPHYSIOCON conference organized by "Geri Care Hospital Wellness by Geriatricians", T Nagar, Chennai, India on 8 Sep 2022 at Benzz Park, Chennai.

WEBINARS DELIVERED & ATTENDED

- Delivered webinar on "Outcome Based Education" to school of physiotherapy, Chettinad Academy of Research and Education, Chennai, India on 10th June 2020.
- "New Normal in Physiotherapy in the Times of Pandemic", held on 26th June 2020 at AIMST University.
- "Understanding Scoliosis -Science and Management of Scoliosis in Layman's Terms", held on 28th Aug 2020 at AIMST University.

SELECTED SEMINARS/WORKSHOPS/CONFERENCES PRESENTED/ ATTENDED

- OP. Singh, J. Madhanagopal et al., Design and Development of Cost-Effective Spirometry Device, at ICUW 2019, Universiti Teknologi Malaysia, Kuala Lumpur, 4-6 Dec 2019-Paper Presentation.
- Participated in "Physiotherapy Management in Cervicogenic Headache" workshop held during 29th and 30th June 2019 at AIMST University.
- Participated in "Writing Effective Exam Questions" held on 28th Feb 2019, AIMST University, Malaysia.
- Participated in "Neuro pediatrics Physiotherapy Workshop" between 10th -13th July 2018, AIMST University, Malaysia.

- Participated in the "University Leadership Camp IV", held on 5th and 6th July 2013 conducted by AIMST University at Rainbow Paradise Hotel, Penang, Malaysia.
- Participated in the "University Leadership Camp III", held on 15th and 16th Feb 2013 conducted by AIMST University at Rainbow Paradise Hotel, Penang, Malaysia.
- Attended the "Workshop on Outcome Based Education in Higher Education Institutions" held during 11th & 30th Sep 2011 and 7th & 14th Oct 2011 at Universiti Utara Malaysia
- Participated "1st Physiotherapy Student Conference" held on 29th April 2011 conducted by School of Physiotherapy, Faculty of Allied Health Professions, AIMST University, Malaysia.
- Participated in "Manipulative therapy workshop 2009" held on 18th and 19th July 2009, Singapore.
- Participated in The AIMST Staff club FUN OLYMPICS 2010 held at AIMST University, Malaysia.
- Participated in the workshop "Ethics for Educators", held on 7th May 2010 at AIMST University, Malaysia.
- Attended 5th Annual Conference of Indian Academy of Geriatrics, GERICON 2007, on the topic "Care for the Elderly" held on 1st and 2nd Sep 2007 at Nizam's Institute of Medical Sciences, Hyderabad, India.
- Participated in "Neuro Update Chennai" workshop held during 4th 7th Jan 2007.
- Attended Screening camp on 'FALL' conducted by senior citizen bureau held on 16th Dec 2006 at Kumaran Hospital, Chennai. As one of the members of multidisciplinary team, have done a 'FALL ASSESSMENT' for older people.
- Participated in the seminar on "Introduction of Mechanical Dysfunction- Diagnosis and Treatment (McKenzie concept) held on 28th Nov 2006 at College of Physiotherapy, Saveetha University, Chennai, India.
- Attended "Motor Relearning Program" workshop held during 17th -19th Nov 2006 at Gurkul, Chennai conducted by the ALUMNI of the Government College of Physiotherapy, Trichy.
- Attended National seminar on POPULATION AND AGING held on March 2006, Sri Venkateswara University, Tirupathy, India.
- Attended Screening camp on 'HEALTHY BONES' conducted by senior citizen bureau held on 21st Jan 2006 at Kumaran Hospital, Chennai. As one of the members of multidisciplinary team, have done a 'OSTEOPOROSIS ASSESSMENT' for older people
- Attended Third Annual conference of Indian academy of geriatrics, GERICON 2005 held on Dec 2005, Trivandrum, India.

DECLARATION

I hereby declare that all the information given above are true and accurate to the best of my knowledge.