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TAGORE MEDICAL COLLEGE & HOSPITAL

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SOUVENIR

IPHA-TN-CON26

26th Annual State Conference

Reimagining Public Health for the Future:

Primary Care & Digital Innovation



DIGITAL
INNOVATION



PRIMARY
CARE



COMMUNITY
HEALTH



PUBLIC HEALTH
FOR ALL



19-20

June 2026

Department of Community Medicine

Tagore Medical College & Hospital

CHENNAI

In association with

Indian Public Health Association – Tamil Nadu Branch

IPHA – TN – CON 26

26th Annual State Conference

19th & 20th June 2026

***“Reimagining Public Health for the future:
Primary care & Digital Innovation”***

Organized by

Department of Community Medicine

Tagore Medical College & Hospital

CHENNAI

In association with

Indian Public Health Association – Tamil Nadu

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Dr. M.Mala,M.A, M.Phil., Ph.D.

Chairperson – Tagore Educational Trust



I am delighted to extend a warm welcome to all the distinguished delegates, speakers, academicians, researchers, and participants of the conference organized by Tagore Medical College & Hospital. This conference provides an excellent opportunity for public health professionals, healthcare experts, and academicians to come together, exchange knowledge, share experiences, and discuss innovative approaches to addressing contemporary public health challenges.

Tagore Medical College & Hospital has consistently strived to achieve excellence in medical education and healthcare delivery. The Department of Community Medicine has been instrumental in advancing our vision of promoting community health through quality education, impactful research, and dedicated service. Their unwavering commitment to address public health priorities and fostering academic excellence has significantly contributed to strengthening healthcare systems and improving community well-being. By hosting this prestigious conference, they once again demonstrate their dedication to fostering collaboration, innovation, and evidence-based solutions for the health challenges of today and the future.

I would like to take this opportunity to extend my sincere gratitude to the Indian Public Health Association (IPHA) for granting Tagore Medical College & Hospital the privilege of hosting this significant event. IPHA has played a pivotal role in advancing public health through research, education, advocacy, and professional development. Its continued efforts in promoting scientific exchange and strengthening public health practice have made a meaningful contribution to improving population health across the country.

I also commend the organizing committee for putting together an inspiring and enriching scientific program. I am confident that the deliberations, presentations, and networking opportunities during this conference will lead to meaningful collaborations, exchange of ideas, and innovative solutions that will contribute to a healthier society.

I wish the conference tremendous success and look forward to the impactful outcomes it will generate.

With best regards,

Dr. M. Mala

Chairperson
Tagore Educational Trust



I am delighted to convey my greetings and best wishes to the organizers, delegates, academicians, researchers, and students participating in IPHATNCON 2026, organized by the Department of Community Medicine, Tagore Medical College and Hospital, Chennai.

The theme of the conference, "Reimagining Public Health for the Future: Primary Care and Digital Innovation," is both timely and relevant in the context of India's evolving healthcare needs and Tamil Nadu's continued leadership in public health. As our health systems address the dual burden of communicable and non-communicable diseases, strengthening primary healthcare and harnessing digital innovations have become essential for ensuring equitable, accessible, and quality healthcare for all.



Tamil Nadu has long been recognized for its strong public health infrastructure, effective maternal and child health programs, and commitment to universal access to healthcare. At the national level, initiatives aimed at strengthening comprehensive primary healthcare, expanding digital health platforms, and improving health outcomes underscore the importance of innovation, evidence-based policymaking, and inter-sectoral collaboration.

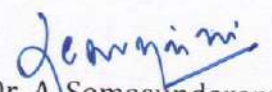
Academic forums such as IPHATNCON provide valuable opportunities for knowledge exchange, dissemination of research findings, and meaningful dialogue among public health professionals, policymakers, researchers, and students. Such interactions are crucial for identifying context-specific solutions and translating research into practice to address emerging public health challenges.

I commend Tagore Medical College and Hospital and the Organizing Committee for bringing together distinguished experts and stakeholders committed to advancing public health and strengthening healthcare delivery systems. The conference will undoubtedly serve as an important platform for sharing experiences, fostering partnerships, and exploring innovative approaches to improve population health.

I am confident that the scientific deliberations and discussions during IPHATNCON 2026 will contribute significantly to ongoing efforts towards achieving better health outcomes, reducing health inequities, and building a resilient, responsive, and future-ready public health system for Tamil Nadu and India.

I wish IPHATNCON 2026 every success and hope that the conference proves to be a rewarding and enriching experience for all participants.

With best wishes


(Dr. A. Somasundaram)



Dr. Ravichandran Doraiswamy
MBBS, MD(Anat),PGDS,DABRM

**Dean – Tagore Medical college
and Hospital**



It gives me immense pleasure to extend my warm greetings to all the delegates, faculty members, students, researchers, public health professionals, and distinguished guests participating in the Annual State IPHA – TN – CON 26 Conference on “Reimagining Public Health for the Future: Primary Care and Digital Innovation”, organized by the Department of Community Medicine, Tagore Medical College and Hospital.

Public health today stands at a transformative juncture where technological advancements, demographic shifts, and emerging health challenges are reshaping healthcare delivery worldwide. In this evolving landscape, primary care continues to serve as the foundation of a strong and equitable health system, while digital innovation offers unprecedented opportunities to enhance accessibility, efficiency, quality, and continuity of care.

The theme of this conference is both timely and visionary. It highlights the critical need to integrate people-centered primary healthcare with digital technologies to address current and future public health challenges. From telemedicine and artificial intelligence to digital health records and data-driven decision-making, innovation is rapidly redefining the way healthcare is delivered and experienced.

This conference provides an excellent platform for academicians, healthcare professionals, policymakers, researchers, and students to exchange ideas, share best practices, and explore innovative solutions that can strengthen health systems and improve population health outcomes. Such collaborative efforts are essential for achieving sustainable healthcare and advancing the goal of Universal Health Coverage. I congratulate the Department of Community Medicine for organizing this important academic event and bringing together distinguished experts from diverse fields. I am confident that the scientific deliberations and discussions will inspire new perspectives and contribute meaningfully to the future of public health.

I wish the conference grand success and hope that it fosters knowledge, innovation, collaboration, and a renewed commitment towards building healthier communities.

"The future of public health lies in strengthening primary care, embracing innovation, and ensuring that no community is left behind."

With best regards,

A handwritten signature in pink ink, appearing to be 'DR' followed by a flourish.

Dr. Ravichandran Doraiswamy

Dean

Tagore Medical College and Hospital

Dr.D.S.Gopalan,M.S,Phd,ACME
Vice Pricipal - Tagore Medical
college and Hospital



It is with great pride and immense satisfaction that I extend my heartfelt greetings and best wishes to all delegates, eminent academicians, healthcare professionals, researchers, policymakers, students, and distinguished guests participating in the **Annual State IPHA–TN–CON26 Conference** on the theme “**Reimagining Public Health for the Future: Primary Care and Digital Innovation,**” organized by the Department of Community Medicine, Tagore Medical College and Hospital in association with Indian Public Health Association –TN branch.

The world of healthcare is undergoing an unprecedented transformation, driven by scientific progress, digital technologies, and evolving population needs. As we navigate these dynamic changes, the convergence of robust primary healthcare systems with innovative digital solutions has emerged as a powerful catalyst for achieving equitable, efficient, and sustainable healthcare delivery.

The theme of this conference reflects a forward-looking vision that resonates with the global commitment towards Universal Health Coverage and resilient health systems. Digital health innovations, artificial intelligence, precision medicine, telehealth, and data-driven public health strategies are revolutionizing healthcare and opening new frontiers in disease prevention, health promotion, and patient-centered care.

Academic forums such as this serve as invaluable platforms for intellectual exchange, interdisciplinary collaboration, and the dissemination of evidence-based practices. By bringing together experts and young minds from diverse domains, this conference promises to stimulate meaningful dialogue and inspire innovative approaches to address emerging public health challenges.

I commend the Department of Community Medicine for their exemplary efforts in organizing this prestigious scientific gathering and for fostering a culture of academic excellence and social responsibility. I am confident that the deliberations and scientific sessions will generate new insights and strengthen our collective commitment towards building healthier and more resilient communities.

I convey my sincere best wishes for the grand success of this conference and hope that it will pave the way for transformative ideas, strategic partnerships, and impactful innovations that will shape the future of public health.

“Excellence in public health is achieved when innovation meets compassion, and technology serves humanity with equity and inclusiveness.”

With best regards,

Vice Pricipal

Tagore Medical College and Hospital



Indian Public Health Association

(Official Publication: Indian Journal of Public Health)

Headquarters Secretariat

110, Chittaranjan Avenue, Kolkata 700 073

Registered under the West Bengal Societies Registration Act, XXVI of 1961

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Prof. (Dr.) Mausumi Basu

Message from President, IPHA



Dear colleagues and friends,

It is a privilege to greet you on the occasion of the **26th Tamil Nadu IPHA State Branch Conference** in Chennai. The theme, “Reimagining Public Health for the Future: Primary Care and Digital Innovation,” is both timely and visionary. Strengthening primary care, empowered by appropriate digital technologies, is essential for equity, resilience, and people-centered services. I am confident that your deliberations will generate practical strategies, foster partnerships, and inspire our younger professionals to lead transformative change in public health across Tamil Nadu and India.

I wish the conference grand success and meaningful outcomes.

Warm regards,

Dr. Sanghamitra Ghosh

President

Indian Public Health Association

Dr. Prabakaran

**Organizing Secretary - Tagore
Medical college and Hospital**



Greetings on behalf of the IPHATNCON-2026 Organizing Team!

The Department of Community Medicine, Tagore Medical College and Hospital, Chennai, in association with the Indian Public Health Association (IPHA) – TN Branch, takes immense pride in organizing the Annual State Conference, **IPHATNCON-2026**, on the **19th and 20th of June 2026**. This year, the conference centers around the highly relevant theme: **"Reimagining public health for the future: Primary care & Digital innovation."**

As one of the oldest and most prestigious professional organizations in India, **IPHA** continues to lead healthcare advancements. The newly revitalized IPHA TN Branch has been actively driving academic, research, and public health initiatives this year, and we are confident that our current office bearers will bring about impactful advancements across Tamil Nadu.

IPHATNCON-2026 is envisioned to provide participants with profound insights into the future of healthcare. To that end, we have carefully curated hands-on workshops focusing on **Artificial Intelligence in Public Health** and **Operational Research**. Additionally, eminent national and international speakers have been invited for our plenary sessions and panel discussions. Special segments like the PG Quiz, alongside oral and poster presentations, have been meticulously designed to benefit postgraduates in Community Medicine and Public Health.

I extend a warm and heartfelt welcome to the IPHA Headquarters and State Branch office bearers, our esteemed speakers, and all the delegates. Let us collaborate to make IPHATNCON-2026 a resounding success!

With best regards,

Organizing Secretary

Tagore Medical College and Hospital



Indian Public Health Association

(Official Publication: Indian Journal of Public Health)

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Founder Member
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President

Dr. Sanghamitra Ghosh

Secretary General

Prof. (Dr.) Kaushik Mitra

Treasurer

Prof. (Dr.) Mausumi Basu

From the Desk of the Secretary General



Dear friends and colleagues,

On behalf of the Indian Public Health Association, it gives me immense pleasure to extend a warm welcome to all participants to the Annual State Conference of the IPHA Tamil Nadu State Branch, **IPHA-TN-CON 2026**, to be held on **19th and 20th June 2026** at **Tagore Medical College & Hospital, Chennai**.

This year's conference is centered around the theme, "**Reimagining Public Health for the Future: Primary Care & Digital Innovation**." The theme underscores the growing importance of strengthening primary healthcare systems while harnessing the potential of digital technologies to improve access, efficiency, and equity in healthcare delivery. It also highlights the need for innovative, people-centered approaches that can address emerging health challenges and build resilient health systems for the future.

IPHA-TN-CON 2026 aims to bring together public health experts, clinicians, academicians, researchers, policymakers, and young professionals from diverse disciplines to exchange ideas, share experiences, and collectively contribute towards shaping a healthier and more sustainable future. Such collaborative efforts are essential to re-envision public health practice and accelerate progress towards universal health coverage.

We are delighted to acknowledge your esteemed presence and active participation, which are highly valued. Your dedication to the advancement of public health will undoubtedly enrich the deliberations and contribute significantly to the success of this important gathering. The conference will offer a vibrant platform for scientific exchange, networking, and fostering collaborations among public health professionals and stakeholders. I am confident that IPHA-TN-CON 2026 will serve as a catalyst for innovative thinking and collective action towards strengthening public health systems and improving population health outcomes.

I look forward to your enthusiastic participation and valuable contributions. Together, let us continue our commitment to building healthier communities and advancing the cause of public health.

Wishing you all a productive, enriching, and memorable conference.

Warm regards,

Kaushik Mitra

Prof. (Dr.) Kaushik Mitra

Secretary General

Indian Public Health Association

Dr. R.Sindhuri

Joint Secretary - IPHA-TN

**Associate Prof, PSP Medical college
and Hospital, Kancheepuram**



IPHA Tamil Nadu State Branch: A New Beginning for Public Health Excellence

The year 2025 marked a new chapter for public health professionals in Tamil Nadu with the revival of the Indian Public Health Association (IPHA) State Branch. After nearly a decade without an active state chapter, the association was re-established and formally recognized by the National General Body of IPHA, paving the way for renewed collaboration, academic exchange, and public health advocacy.

Although still in its formative phase, the branch has taken meaningful steps toward rebuilding a vibrant public health community in the state. Over the past year, efforts have focused on fostering professional engagement through academic activities, continuing professional development initiatives, observance of important public health events, and innovative platforms that encourage creativity and scientific thinking among students and public health professionals.

The enthusiastic response from members, faculty, practitioners, and students has been encouraging and reflects the growing need for a strong professional forum dedicated to public health. These initial activities have laid the foundation for a dynamic and inclusive association committed to advancing public health knowledge, advocacy, research, and collaboration.

As we gather for the first conference of the reformed Tamil Nadu State Branch, we celebrate not only our achievements thus far but also the immense possibilities that lie ahead. With the collective support of our members and stakeholders, IPHA Tamil Nadu aspires to emerge as a leading platform for professional excellence, policy dialogue, capacity building, and evidence-based public health action in the years to come.

Together, let us strengthen the voice of public health and work towards a healthier and more equitable future for all.

With best regards,

Joint Secretary

IPHA - TN

Dr.S.V. Saranya

Executive Committee - IPHA- TN

Asst Prof, Government Theni Medical college and Hospital, Theni



**SHAPING TOMORROW'S COMMUNITY MEDICINE: DIGITAL INNOVATION,
ENVIRONMENTAL RESILIENCE, AND MODERN PEDAGOGY**

MESSAGE FROM THE EXECUTIVE COMMITTEE MEMBER

It is a matter of great pride and privilege to extend my warmest greetings to all the distinguished dignitaries, esteemed delegates, and fellow academicians attending IPHA-TN-CON 2026.

The theme of this year's conference, " Reimagining Public Health for the future: Primary Care and Digital Innovations ", addresses a critical frontier in our field. As we look ahead, the future of public health is undergoing a massive paradigm shift. Navigating this future successfully requires our fraternity to focus on three critical technical pillars:

Predictive Health Logistics & AI Integration: Moving beyond traditional surveillance into data-driven prevention. By deploying artificial intelligence, cutting-edge analytics, and real-time health metrics, we can map disease risks early and optimize resource allocation before crises escalate.

Eco-Centric Health Infrastructures: Constructing sustainable community frameworks that directly address climate-induced health challenges. This involves mitigating the modern environmental and social determinants of health to safeguard vulnerable populations and guarantee health equity.

Innovative Pedagogy: Transforming medical education through interactive, game-based learning and competency-driven instruction to train the next generation of Public health Experts.

As members of the Executive Committee, our constant endeavor is to champion these emerging paradigms and foster environments that promote rigorous scientific inquiry, innovative teaching, and collaborative growth.

This souvenir beautifully encapsulates the collective intellect, dedication, and forward-thinking mindset of our fraternity. It stands as a valuable record of academic excellence and future-focused visions that will undoubtedly inspire further research and community interventions.

I would like to place on record my sincere appreciation for the organizing team Department of Community Medicine, Tagore Medical College & Hospital, Chennai for their flawless execution and meticulous planning. My heartfelt thanks also go out to the IPHA- TN Branch leadership, our patrons, and every participant whose presence enriches this event.

I wish the conference resounding success, and I am confident that the deliberations over these days will leave a lasting impact on our professional and academic journey.

With best regards,

Executive Committee Member

IPHA-TN

CHIEF PATRONS



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IPHA TN BRANCH CONFERENCE-2026

Tagore Medical College & Hospital, Chennai

Conference Workshop: Operational Research (OR)

Friday, June 19, 2026 Agenda Lecture Hall II (3rd Floor)

Time	Lecture / group work (each lecture will be followed by time for discussion)	Chairperson	Speaker
08 50	Registration	Dr Divyaparvathy J	-
09 00	Welcome address and Inauguration	Dr Selvaraj I Dr Sindhuri	Dr Manickam & Dr Hemant
09 30	<u>Lecture</u> : Operational research – what, why and how?	Dr Prabakaran J	Dr Manickam
11 00	Group photo, tea break		
11 30	<u>Lecture</u> : Translating operational research into policy and practice	Dr Selvaraj I	Dr Manickam
12 00	<u>Lecture</u> : Example of a statewide operational research project from Tamil Nadu (#TNKET)	Dr Prabakaran J	Dr Hemant
13 00	Lunch		
14 00	<u>Lecture</u> : Research question, Aim and Objectives	Dr Divyaparvathy J	Dr Hemant
14 30	<u>Group work</u> : Formulating operational research question(s) followed by presentations	Dr Selvaraj I	Dr Hemant
15 00	Tea Break		
15 30	<u>Group work</u> : Formulating operational research question(s) followed by presentations	Dr Prabakaran J	Dr Hemant/ Mr Jeyakumar
16 30	Feedback and Conclusion	Dr Divyaparvathy J	All faculty
17 00	End of workshop		

About workshop faculty from ICMR National Institute of Epidemiology (ICMR-NIE), Chennai

Dr P Manickam, Scientist F and Head, Division of Health Systems Research. manickam@nie.gov.in

Dr Hemant D Shewade, Scientist E, Division of Health Systems Research. hemant@nie.gov.in

Mr A Jeyakumar, Technical Officer-C, Division of ICMR School of Public Health. ajeyakumar@nie.gov.in

IPHA TN BRANCH CONFERENCE-2026

Tagore Medica College & Hospital, Chennai

Conference Workshop: AI Hands- on workshop SUPRABHAT

(Supporting Universal access to healthcare by Providing Rural areas Access and Bridging Healthcare gaps using AI Tools)



Friday, June 19, 2026 Agenda Lecture Hall IA (3rd Floor)

Date: 19.06.2026

Time: 9.00-5.00pm

Place: Lecture Hall 2 (3rd floor)

AGENDA

Date	Time & duration	Title	Name of the Chairperson/ Institution	Name of the Speaker/ Resource Person /Institution	Internal/ External
19.06.2026	09:00 – 09:30	Registration	Dr. Rathibala	Dr. Gayathri PG Dr. Sharmila	External
19.06.2026	09:30-10:00	Welcome and introduction of participants	Dr.Prabhakaran.J	Dr. Vijaya Karthikeyan	External
19.06.2026	10:00 – 10:30	How to generate evidence for introducing Ai in primary healthcare	Dr. Kowsalya	Dr Rakshith	External
19.06.2026	10:30-11:00	Using Ai for cardiac assessment	Dr.Prabhakaran.J	Dr. Balu P.S	External
19.06.2026	11:00-11:15	Tea Break			
19.06.2026	11:15-12:15	Using Ai for eye and ear screening	Dr. Kowsalya	Dr Shiva L C	External
19.06.2026	12:15-13:00	Using Ai for diabetes foot assessment	Dr.Prabhakaran.J	Dr Rakshith	External
19.06.2026	13:00-14:00	Lunch break			
19.06.2026	14:00-15:00	Using Ai for breast health screening	Dr. Kowsalya	Dr. Balu P.S	External
19.06.2026	15:00-15:30	Using Ai for lung health	Dr.Prabhakaran.J	Dr Shiva L C	External

19.06.2026	15:30-15:45	Tea break			
19.06.2026	15:45-16:15	Ai for oral health screening	Dr. Kowsalya	Dr Rakshith	External
19.06.2026	16:15-16:30	Ai tools for SDG	Dr.Prabhakaran.J	Dr. Balu P.S	External
19.06.2026	16:30 -17.00	Feedback and valedictory	Dr.Prabhakaran.J	Dr Shiva L C	External

IPHA TN BRANCH CONFERENCE-2026

Tagore Medica College & Hospital, Chennai



Saturday, June 20, 2026 Agenda Lecture Hall II (3rd Floor)

Time	Topic	Speaker
09:00 – 09:30 AM	Plenary Session 1: Dog Bite vs Rabies – Current Policy vs Change of Policy	Dr. S. Vinodhraj CHO, Karaikudi Corporation, Govt. of Tamil Nadu
09:30 – 10:00 AM	Plenary Session 2: How We Tried and Could Prevent Millions of Lives in India?	Dr. P. Ganesh Kumar Scientist E, ICMR-NIE
10:00 – 10:30 AM	Plenary Session 3: Lifestyle Medicine – The Evidence-Based Foundation for the Science of Healthy Living	Dr. Nisha. B Saveetha Medical College, Chennai
10:30 – 10:45 AM	Tea Break	—
10:45 – 11:30 AM	Conference Inauguration	Chief Guests & Dignitaries
11:30 – 12:00 PM	Plenary Session 4: Re-imagining Public Health for the Future: Establishing a Digitally Enabled On-Campus Centre for Community	Dr. G. Kalaiselavan AIIMS, Mangalagiri
12:00 – 12:30 PM	Plenary Session 5: Population Ageing – Are We Prepared? Challenges and Solutions	Dr. M. Logaraj SRM Medical College
12:30 – 01:00 PM	Plenary Session 6: Implementation is the Intervention: Rethinking Public Health Impact in India	Dr. Sudharshini Subramanian Government Vellore Medical College
01:00 – 01:45 PM	Lunch Break	—
01:45 – 02:30 PM	Plenary Session 7: Million Hearts Project, USA	Dr. Shyamkumar Sriram University of North Texas, USA
01:45 – 02:30 PM	Paper & Poster Presentations	Parallel Scientific Sessions
02:30 – 03:15 PM	Panel Discussion: One World, One Health– Bridging the	Dr.Monisha Chandran Dr.Johnson Cherian

	Gap Between Ambition and Action	Dr.S.Arun Murugan Dr.Rajesh.J Dr.Swetha
03:15 – 04:00 PM	Postgraduate Quiz	IPHA-TN-CON26
04:00– 04:30 PM	Valedictory Function	Organizing Committee

EXCELLENCE IN PUBLIC HEALTH



Dr. K. Surendhiran

MD (Community Medicine)

Surveillance Medical Officer
WHO Country Office, Chennai

ACADEMIC PROFILE

Dr. K. Surendhiran, MD (Community Medicine), is a distinguished public health professional and an alumnus of JIPMER, Puducherry. With over three decades of dedicated service in public health, he has been serving as a Surveillance Medical Officer with the World Health Organization, Chennai, since 1999. His outstanding contributions to disease surveillance, immunization programmes, and India's Polio Eradication Initiative have earned him national and international recognition, including the Tamil Nadu Government Best Doctor Award and commendations from WHO Headquarters, Geneva.

CONGRATULATIONS

We proudly congratulate Dr. K. Surendhiran on being honoured with the "Excellence in Public Health" Award and extend our best wishes for his continued contributions to public health excellence.

Scientific Abstracts

1

Registration ID : IPHA -TNCON-007

Title: Self-Care Practices Among Diabetes Mellitus Patients in Urban Slums of Raigad District

Name of all authors: Dr Shiksha Pandey (MPH), Dr Nisha Relwani (Professor), Dr Danya Jawahar (JR3), Dr Prasad Waingankar (HOD, Dept of Community Medicine),MGM Medical college, Kamothe, Navi Mumbai

Background: Diabetes mellitus is a major public health problem associated with significant morbidity and complications. Self-care practices such as dietary modification, physical activity, medication adherence, blood glucose monitoring, and foot care are essential for achieving optimal glycaemic control and preventing complications. However, adherence to these practices remains inadequate, especially among urban slum populations with limited healthcare access. Objectives: To study self-care practices among known diabetes mellitus patients in urban slums of Raigad district, Maharashtra; to assess the association between socio-demographic factors and self-care practices; and to identify reasons for non-adherence to self-care practices. Methods: A community-based cross-sectional study was conducted among 220 known diabetes mellitus patients aged above 35 years residing in urban slums from November 2022 to December 2023. Systematic sampling technique was used. Data were collected using a pre-designed and pre-tested questionnaire and analysed using IBM SPSS version 26.0. Chi-square test was applied to determine associations, with $p < 0.05$ considered statistically significant. Results: Among the participants, 59.6% belonged to the 40–60 years age group and 51.4% were males. Out of the total 220 diabetes mellitus patients, majority of the diabetes patients belong to middle socioeconomic class i.e. 103 (46.9%), as defined by their per capita income. Majority of the participants were overweight i.e. 104(47.3%) and 74 (33.6%) were obese and only 42 (19.1%) were normal. Adherence was highest for medication compliance (88.1%) followed by non-smoking behaviour (70.4%) and diet modification (43.1%). Poor adherence was observed for physical activity (16.3%), blood glucose monitoring (27.7%), and foot care (30.4%). Common reasons for non-adherence included forgetfulness, busy schedule, lack of knowledge, ageing, and ignorance. Conclusion: Self-care practices among diabetes mellitus patients in urban slums were suboptimal, particularly regarding physical activity, foot care, and blood glucose monitoring. Strengthening health education and behaviour change interventions is necessary to improve adherence and prevent diabetes-related complications. Keywords: Diabetes mellitus, self-care practices, urban slums

Registration ID : IPHA-TNCON-022

Title: Prevalence and Risk Factors of Hypertension Among Adults Attending a Rural Primary Health Centre in Chengalpattu: A Cross-Sectional Study

Dr. Nisanth S¹, Dr. Sakthi Siva Kumar S², Dr. Surya BN³, Dr. Vinoth Gnana Chellaiyan D⁴1- Second year postgraduate, Department of Community Medicine, CHRI2- Medical Officer, Govt. Primary Health Centre, Kelambakkam 3- Assistant Professor, Department of Community Medicine, CHRI 4- Professor, Department of Community Medicine, CHRI

Background: Hypertension is a major non-communicable disease and an important public health concern worldwide. It contributes significantly to cardiovascular diseases such as coronary artery disease, stroke, heart failure, and chronic kidney disease. In India, the burden of hypertension is increasing steadily due to lifestyle changes, ageing, and epidemiological transition. Previously hypertension was mainly seen in urban populations, now it is emerging as a significant health concern in rural communities as well. Early identification and management at the primary care level are essential to prevent complications.**Objectives:**To estimate the prevalence of hypertension and identify associated risk factors among adults attending a Government Primary Health Centre in the rural field practice area of Chengalpattu district.**Methods:** A cross-sectional analytical study was conducted among 350 adults attending a Government Primary Health Centre in rural Chengalpattu district. Data were collected using a pre-tested semi-structured questionnaire covering socio-demographic details, behavioural risk factors, and clinical parameters. Blood pressure was measured using a standardized sphygmomanometer. Hypertension was defined as systolic blood pressure ≥ 140 mmhg and/or diastolic blood pressure ≥ 90 mmhg, or current use of antihypertensive medication. Data were analysed using SPSS version 27, and associations were tested using regression analysis.**Results:**The mean age of participants was 43.15 ± 15.68 years. The overall prevalence of hypertension was 34.86% (122 participants). Hypertension was significantly associated with increasing age, male gender, overweight or obesity, sedentary lifestyle, tobacco use, and family history of hypertension ($p < 0.05$). A considerable proportion of participants were newly diagnosed during the study.**Conclusion:**The study found a high prevalence of hypertension among adults attending a rural PHC in Chengalpattu district. Strengthening screening services, promoting healthy lifestyle practices, and early management at the primary care level are important to reduce the burden of hypertension in rural communities.**Keywords:**Hypertension, Prevalence, Risk factors, Primary health centre, Rural population.

Registration ID: IPHA-TNCON-025

Title: Impact of a structured Health education programme on awareness of Cervical Cancer and HPV vaccination among women of a Teaching Institute in Chengalpattu District: A Quasi-experimental study

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Background: Worldwide, Cervical cancer is the fourth most common cancer in women globally with around 6,60,000 new cases and around 3,50,000 deaths in 2022. Cervical cancer kills one Indian woman every eight minutes, making the disease one of the country's most lethal cancers. Although cervical cancer is preventable, the utilization of preventive services such as HPV vaccination and Pap smear screening remains low. One of the major barriers identified is lack of awareness and inadequate health education. This study adopts a quasi-experimental design, which focuses on structured educational interventional assessment using pre-test and post-test evaluation. It evaluates perceptions, enablers and nurturers (PEN) about Cervical cancer and HPV vaccination and also the change in attitude and willingness for vaccination. Objectives: To assess the impact of a structured health education programme on cervical cancer awareness and willingness to receive HPV vaccination among women of a teaching institute in Chengalpattu District. Methods:A Quasi-experimental study was conducted among 110 adult women aged (18-45 years) working/studying in a teaching institute of Chengalpattu district. Baseline PEN pertaining to cervical cancer and HPV vaccination was assessed using a pre-validated, semi-structured pre-test questionnaire. A structured health education programme incorporating an audio-visual presentation and interactive discussions was delivered. Post intervention assessment was conducted after 14 days using the same questionnaire. Data were analysed using SPSS version 27. Descriptive and inferential tests, including the paired t-test was done. A p-value <0.05 was considered statistically significant with a 95% confidence interval to estimate the precision of the effect size. Results: The mean age of participants was $21.7 \pm (7.23)$ years. The mean PEN score significantly increased from $20.11 \pm (4.71)$, $6.86 \pm (1.95)$, $6.66 \pm (1.86)$ before the intervention to $22.95 \pm (4.97)$, $8.49 \pm (1.98)$, $11.84 \pm (2.62)$ respectively, after the intervention with a p-value < 0.001. Awareness regarding risk factors, warning symptoms, screening methods, HPV infection, and HPV vaccination improved significantly following the educational programme. The proportion of participants expressing willingness to undergo cervical cancer screening and recommend HPV vaccination also increased after the intervention. Conclusion: The structured health education programme significantly improved awareness regarding cervical cancer and HPV vaccination among women of the teaching institute. Regular educational interventions can play a vital role in enhancing knowledge and promoting preventive health-seeking behaviour, thereby contributing to cervical cancer prevention. Keywords: Cervical cancer, HPV vaccination, Health education, Awareness, Quasi-experimental study, Women, Chengalpattu District.

Registration ID : IPHA-TNCON-049

Title: Awareness about breast cancer and early detection practices among adult women in a rural area of Central India: A cross-sectional study

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Introduction : Breast cancer is the most common cancer among women worldwide and a leading cause of cancer-related mortality in India, accounting for 13.6% of all cancer cases (GLOBOCAN 2022). However, awareness of risk factors, warning signs and screening techniques remains low in rural areas, despite this burden, contributing to late-stage diagnosis and poor outcomes. **Objectives & Aim:** The present study was carried out to measure the level of awareness regarding breast cancer including its risk factors, signs and symptoms and early detection techniques among the women of reproductive age group, living in rural central India and to study the association of awareness with sociodemographic characteristics. **Materials and Methods:** The study was an analytical cross-sectional study conducted in the RHTC Bhidi field practice area of the Department of Community Medicine. A total of 210 adult women aged above and equal to 18 years were recruited using probability proportional to size sampling from 7 villages in the field area. Data were acquired using a validated structured questionnaire which included components of demographic characteristics and breast cancer awareness. Associations with age, education, marital status and religion were assessed using chi-square test. **Results and Discussion:** The mean age of participants was 36.4 ± 11.9 years and 85.7% were married and 72.4% Hindu. The most acknowledged risk factor was smoking/alcohol use (72.4%) while awareness of radiation exposure (11.0%) and oral contraceptive use (23.3%) was poor. 79.5% acknowledged painless breast lump but less recognised nipple alterations (57–63%). Only 16.7% knew the right age for starting clinical breast examination. The level of schooling was significantly associated with most knowledge domains ($p < 0.05$). **Discussion:** Wider gaps in awareness were seen for gynaecological risk factors and screening schedules, comparable with findings in other rural Indian settings. Education came up as an important determinant and highlighted the need for focused health communication through community-based platforms such as ashas and self-help groups. **Conclusion:** Breast cancer awareness among rural women of central India is still not at the desired level especially about the risk factors and early detection. Structured Health Education Interventions Integrated in existing Primary Healthcare Programmes are Urgently Needed.

Registration ID : IPHA-TNCON-056

Title: Gender-Related Differences in Diabetes Self-Care Practices Among Adults with Type 2 Diabetes Mellitus at a Tertiary Care Hospital, Chennai

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Background: India has 101 million individuals living with diabetes, a 36% rise since 2021. Gender-related differences in diabetes self-care practices remain understudied, particularly in tertiary care settings in Tamil Nadu. Objectives: To assess and compare self-care practices between male and female adults with Type 2 Diabetes Mellitus and identify associated sociodemographic factors. Methods: A comparative cross-sectional study was conducted among 188 Type 2 Diabetes Mellitus patients (94 males, 94 females) attending Madras Medical College OPD using consecutive sampling. Data were collected through an interviewer-administered questionnaire comprising sociodemographic details, clinical profile, and the validated Summary of Diabetes Self-Care Activities scale. Adequate self-care was defined as engagement in self-care behaviour for five or more days per week. Chi-square test, Fisher's exact test, and binary logistic regression were performed using Jamovi v2.6.26. Results: Overall adequate self-care was observed in 50% of males and 54.3% of females. Medication adherence was the best domain (males 75.5%, females 79.7%) and diet the poorest (males 25.5%, females 41.4%). Significant gender differences were found in diet ($p=0.020$), blood glucose monitoring ($p=0.003$), and tobacco abstinence ($p<0.001$). Despite higher insulin use among females (43.6% versus 24.4%), 56.3% had uncontrolled glycaemia. Occupation was significantly associated with adequate self-care in both males ($p=0.024$) and females ($p<0.001$). On multivariate logistic regression, employment status was the only independent predictor among females (OR=3.48, 95% CI: 1.33–9.08, $p=0.011$). Conclusion: Poor diabetes self-care is universal with domain-specific gender differences. Occupation is the strongest independent predictor, underscoring the need for gender-sensitive, employment-aware diabetes self-care interventions. Keywords: Type 2 Diabetes Mellitus, gender differences, Summary of Diabetes Self-Care Activities, occupation, tertiary care

Registration ID : IPHA-TNCON-059

Title: Analysis of Animal Bite Pattern and Rabies Vaccine Utilization in Chengalpattu District through the National Rabies Control Program: A Retrospective Descriptive Study (2024–2025)”

Author: Dhivya Moorthy, Post Graduate, Institute of Community Medicine,
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Background: Rabies, a fatal yet vaccine-preventable disease, causes an estimated 55,000 human deaths worldwide each year. India alone accounts for about 18–20 thousand of these deaths annually, with over 99% of transmissions from dog bites. Despite this burden, only a fraction of bite victims receive post-exposure prophylaxis. Objective: This study aimed to characterize animal bite incidents and rabies vaccine usage in Chengalpattu District, Tamil Nadu, using secondary data from January 2024 to April 2025. Methods: We retrieved monthly reports from the District Health Office in Chengalpattu, including the number of bite patients by animal type and exposure category, vaccine administration route, and utilisation of rabies vaccine vials. Inclusion Criteria: All animal bite cases recorded under the National Rabies Control Program during the study period. Exclusion Criteria: Incomplete or improperly documented records. Sampling Method: Complete enumeration (secondary data). Study Tools: District Health Office monthly NRCP records and reporting formats. Analysis Plan: Descriptive analysis using Microsoft Excel; results expressed as frequencies, percentages, and trends. Results: In total, 80,403 animal bite cases were recorded. Dogs were responsible for 79% of bites, followed by cats (12.5%), monkeys (1.6%), and other animals (6.6%). Most exposures were Category II (58.7%) or Category I (37.4%), with only 3.8% Category III. All bite victims received an intradermal (ID) vaccine regimen; none were given the intramuscular Essen schedule. A total of 55,038 vials of anti-rabies vaccine (ARV) were utilized, and 3,433 vials of anti-rabies serum (ARS) were administered. No clinically suspected or confirmed human rabies cases or deaths occurred during the study period. Conclusion: These findings highlight the dominance of dog bites and the heavy use of ID vaccination in Chengalpattu District. Strengthening dog population control and ensuring continued availability of PEP are recommended to move toward the WHO goal of zero human rabies deaths. Keywords: Animal Bite, Rabies, Vaccine, PEP

Registration ID : IPHA-TNCON-061

Title: Building Heat-Resilient Communities: Effectiveness of a Community-Based Heat Protection Kit and Health Education Intervention on Heat Stroke Prevention Knowledge and Practices Among Rural Adults, Thiruvallur District.

Dr. Srinivasan S, Postgraduate, Dr. Nisha B Professor, Department of Community Medicine, Saveetha Medical College and Hospital, Chennai Conference

Background: Rural communities across tropical India carry a disproportionate burden of heat-related illness yet remain systematically underserved by targeted prevention. Outdoor agricultural labour, absent cooling infrastructure, and constrained health literacy converge to create profound vulnerability. Existing awareness campaigns rarely cross the threshold from knowledge to sustained behaviour change. This study asked a precise question: can placing tangible protective resources directly into the hands of rural adults — alongside structured education — produce meaningful, durable shifts in both heat stroke knowledge and protective practice. A quasi-experimental pre-test/post-test control group study was conducted across two rural villages under a tertiary care teaching hospital's field practice area. Using purposive cluster sampling, 240 adults were enrolled (120 intervention; 120 control). The intervention delivered a standardised Heat Protection Kit — comprising ORS sachets, a cooling towel, UV-protective hat, personal cooling fan, SPF 50+ sunscreen, a pictorial flip chart, and a colour-coded thermometer card — paired with six fortnightly nurse-facilitated sessions grounded in the Health Belief Model and Social Cognitive Theory. Controls received routine primary health centre messaging. Outcomes were measured at baseline (T0), six weeks (T1), and twelve weeks (T2) using the Heat Stroke Prevention Knowledge Score (HSPKS; 30 items; CVI 0.94; $\alpha=0.87$) and the Heat Protection Practice Scale (HPPS; 20 items; $\alpha=0.89$), analysed via paired t-tests, independent t-tests, repeated measures ANOVA, and Cohen's d. Results: Both groups were statistically equivalent at baseline across all sociodemographic and outcome variables ($p>0.05$). At twelve weeks, intervention participants' mean knowledge score surged from 14.3 to 28.4 out of 30 — a 98.6% improvement — against 39.7% in controls ($p<0.001$; Cohen's $d=2.41$). Practice scores demonstrated an even more striking trajectory, climbing from 47.2 to 76.3 out of 100 in the intervention arm (61.7% gain) versus 15.4% in controls ($p<0.001$; Cohen's $d=2.92$). Repeated measures ANOVA confirmed a significant, progressive time $\times$ group interaction for both knowledge ($F(2,458)=84.6$; $p<0.001$; partial $\eta^2=0.27$) and practice ($F(2,458)=97.2$; $p<0.001$; partial $\eta^2=0.30$). Retention stood at 96.3% with non-differential attrition ($\chi^2=0.22$; $p=0.64$). Conclusion: A simple, affordable kit of protective tools — delivered within the existing infrastructure of a teaching hospital's field practice area alongside nurse-led education — generated effect sizes rarely documented in community health intervention research. This model is scalable, immediately replicable, and provides a concrete operational blueprint for embedding heat resilience into rural primary health care systems and national Heat Action Plans. In an era of escalating climate extremes, this evidence argues powerfully for tool-accompanied education as a standard of preventive care. Keywords: Heat stroke prevention, Heat protection kit, Rural community, Community health, quasi-experimental, Heat Action Plan

REGISTRATION ID: IPHA-TNCON-069

Title: Diagnostic Accuracy of Multiplex LIPL21, LIPL32 AND LIPL41 Gene-based PCR for detection of Leptospirosis using igm ELISA as reference standard in a Tertiary Care Hospital of Tiruvallur district, Tamil Nadu

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Background: Leptospirosis is a re-emerging zoonotic disease of major public health importance in tropical regions such as Tamil Nadu, characterized by a wide clinical spectrum and diagnostic challenges, particularly during the early phase of illness. Conventional serological methods such as igm ELISA have limitations in early detection prior to antibody development, necessitating evaluation of rapid molecular diagnostic approaches. Objectives: To develop and evaluate a multiplex conventional PCR assay targeting the lipL21, lipL32, and lipL41 genes for detection of pathogenic *Leptospira interrogans*, and to assess its diagnostic agreement with igm ELISA among clinically suspected leptospirosis cases. Methods: This diagnostic accuracy study was conducted in a tertiary care hospital affiliated with Saveetha Medical College, Chennai, Tamil Nadu. A total of 183 clinically suspected leptospirosis cases were included. Blood samples were tested using multiplex PCR and igm ELISA. Analytical validation of the multiplex PCR assay was performed using previously confirmed positive and negative control samples prior to clinical evaluation. Diagnostic agreement of multiplex PCR with igm ELISA used as the reference standard was assessed using sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), likelihood ratios, and overall agreement. Receiver Operating Characteristic (ROC) curve analysis was performed to evaluate diagnostic performance. Results: During analytical validation, successful amplification was observed in 19 of 20 positive control samples, while absence of amplification was observed in 9 of 10 negative control samples, demonstrating satisfactory analytical performance under controlled laboratory conditions. In the clinical evaluation phase, multiplex PCR demonstrated a sensitivity of 89.2% and specificity of 91.8% compared with igm ELISA. The positive predictive value and negative predictive value were 73.3% and 97.1%, respectively, with an overall agreement of 91.3%. Multiplex PCR detected a comparatively higher number of positive cases (24.6%) than igm ELISA (20.2%), suggesting usefulness during the early phase of illness prior to detectable antibody development. ROC curve analysis demonstrated an AUC of 0.893, indicating good diagnostic agreement with the reference standard. Conclusion: The multiplex PCR assay targeting lipL21, lipL32, and lipL41 genes demonstrated satisfactory analytical performance and good diagnostic agreement with igm ELISA for detection of leptospirosis. The assay provided comparatively rapid results and identified a greater number of cases during the early phase of illness. Although multiplex PCR involves comparatively higher operational cost and specialized laboratory requirements, its potential utility as an adjunct molecular diagnostic tool may support early diagnosis, surveillance, and outbreak preparedness in endemic settings. Keywords: Leptospirosis, Multiplex PCR, lipL21, lipL32, lipL41, igm ELISA, Diagnostic accuracy, Early Diagnosis

REGISTRATION ID: IPHA-TNCON-071

Title: Diagnostic Accuracy of a Newly Developed Multicomponent Peripheral Diabetic Neuropathy Screening Device Among Type 2 Diabetes in the Field Practice Area of a Tertiary Care Hospital in Thiruvallur-A Diagnostic Accuracy Trial

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Background: Diabetic peripheral neuropathy (DPN) is among the most prevalent complications of type 2 diabetes mellitus, affecting approximately 50% of individuals over their lifetime. Existing bedside screening tools suffer from operator dependency and suboptimal sensitivity. This study describes development and validation of a newly developed portable, non-invasive, multicomponent DPN screening device integrating vibration perception threshold (VPT), thermal sensation, and galvanic skin response (GSR)-based sudomotor assessment. Methods: A prospective, randomised, double-blinded, diagnostic accuracy trial was conducted at Saveetha Medical College and Hospital, Thiruvallur district, Tamil Nadu, India. A total of 281 adults with confirmed type 2 diabetes mellitus were enrolled. Nerve conduction studies (NCS) served as the reference standard. Diagnostic accuracy parameters were computed for each individual module and the composite device. Results: Among 281 participants (mean age 54.2 ± 10.15 years; 53.4% male and 46.6% females), 180 (64.1%) were NCS-positive for DPN. Statistically significant associations were observed between DPN status and advancing age ($\chi^2 = 11.35$, $p = 0.010$), female sex ($\chi^2 = 9.838$, $p = 0.002$), and presence of comorbidities (OR 2.30; 95% CI: 1.37–3.88; $p = 0.002$). The sweat module demonstrated the strongest individual performance (sensitivity 67.40%, specificity 92.0%, AUC 0.797). The combined device achieved sensitivity 67.96%, specificity 87.0%, PPV 90.4.0%, NPV 60.0%, Kappa 0.51, and AUC 0.77 (acceptable), demonstrating perfect specificity for DPN detection. Conclusion: The device demonstrates 74.7% accuracy as a non invasive, operator independent, point-of-care screening instrument suitable for resource-limited settings. Its near perfect specificity and PPV make it particularly suited for rule-in diagnosis, enabling confident referral without false-positive burden on health care systems. Keywords: Diabetic peripheral neuropathy; Diagnostic accuracy; Point-of-care screening; Multicomponent device

Registration ID : IPHA-TNCON-079

Title: Structure-Sensation-Stability Model for Early Diabetic Foot Risk Assessment Among Adults with Type 2 Diabetes Mellitus

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Background: Diabetic foot complications are a major cause of morbidity, disability, hospitalization, and lower-limb amputation among individuals with type 2 diabetes mellitus (T2DM). Early identification of high-risk individuals is essential for implementing timely preventive interventions. The Structure-Sensation-Stability (SSS) model provides a comprehensive framework for diabetic foot risk assessment by evaluating structural abnormalities, sensory impairment, and functional instability. Objectives: To assess diabetic foot risk using the SSS model and identify factors independently associated with high diabetic foot risk among adults with T2DM in rural Chengalpattu district. Methods: A community-based cross-sectional analytical study was conducted among 280 adults with T2DM residing in rural Chengalpattu district, Tamil Nadu. Data on socio-demographic characteristics, clinical profile, neuropathy, obesity, foot deformity, foot ulcer status, and mobility were collected using a structured questionnaire and clinical examination based on the SSS model. Statistical analysis was performed using SPSS version 25. Chi-square tests and multivariable logistic regression were used to determine factors associated with high diabetic foot risk. Statistical significance was considered at $p < 0.05$. Results: The mean age of participants was 55.64 ± 12.09 years, mean duration of diabetes was 10.08 ± 5.75 years, mean BMI was 27.75 ± 6.33 kg/m², and mean hba1c was $7.86 \pm 1.36\%$. High diabetic foot risk was identified among 34.3% of participants. Neuropathy demonstrated a significant association with high diabetic foot risk ($\chi^2=47.398$, $p < 0.001$), and participants with neuropathy had substantially higher odds of high diabetic foot risk (OR=18.09; 95% CI: 6.38–51.30). In multivariable logistic regression analysis, neuropathy ($p < 0.001$) and foot deformity ($p=0.041$) emerged as significant independent predictors of high diabetic foot risk. Obesity ($p=0.170$), abnormal Timed Up and Go test results ($p=0.061$), and current foot ulcer status ($p=0.932$) were not independently associated with high diabetic foot risk. Conclusion: A substantial proportion of adults with T2DM were at high risk for diabetic foot complications. Neuropathy and foot deformity emerged as significant independent predictors. Routine diabetic foot screening using the SSS model may facilitate early risk identification and support targeted preventive interventions in rural primary care settings. Keywords: Diabetic foot, Neuropathy, Foot deformity, SSS model, Type 2 diabetes mellitus

Registration ID: IPHA-TNCON-087

Title: Financial Toxicity of Long-Term ncDs Care Among Rural Households in Chengalpattu Tamil Nadu– A Community based Cross-sectional study

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BACKGROUND:Non-communicable diseases (ncds) such as diabetes mellitus, hypertension, cardiovascular diseases, chronic respiratory diseases, cancer, and chronic kidney disease are the leading causes of morbidity and mortality globally(74%) and contribute substantially to the disease burden in India. Most Indian studies on ncDs have focused on out-of-pocket and catastrophic health expenditure, while the broader concept of financial toxicity remains underexplored, particularly in rural settings. Assessing financial toxicity among rural NCD-affected households will help identify vulnerable populations, understand determinants of financial distress, and evaluate gaps in financial protection mechanisms. The findings can support strengthening NP-NCD services, improving financial risk protection, expanding outpatient coverage, and advancing Universal Health Coverage (UHC). **OBJECTIVE:**To estimate the prevalence of financial toxicity among rural households having members with long-term ncDs. To identify socio-demographic, economic, and disease-related factors associated with financial toxicity. **METHODOLOGY** Study Design :Community-based cross-sectional study. Study Setting : Rural Field service area of the Department of Community Medicine ,SRM IST & RC in Chengalpattu District, Tamil Nadu. Study Population :Rural households having at least one member diagnosed with a non-communicable disease for at least 12 months. **Inclusion Criterial:** Households with at least one diagnosed NCD patient who are willing to give informed consent. **Exclusion Criteria:**Households where the NCD patient is critically ill and unable to participate & patient who are not willing . **Study Period** : 12 months **Sample Size** : calculated sample size = 370 households Pilot Study n =60 **Sampling technique:** Random Sampling **MethodStudy Tool** : A semi-structured questionnaire (an adapted financial toxicity questionnaire based on COST-FACIT V2) **Statistical analysis:** Microsoft excel and IBM SPSS version 27.0 **RESULTS** – are awaited **CONCLUSION-** are awaited **KEY WORDS** – Finacial toxicity, ncDs, Long term care

Registration ID: IPHA-TNCON-004

Title: Hypertension Control and Adherence to Recommended Care Practices among Treated Hypertensive Patients Attending a Tertiary Care Hospital in Chengalpattu, Tamil Nadu: A Cross-Sectional Study

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Background: Hypertension is a major public health challenge and a leading contributor to cardiovascular morbidity and mortality. Despite widespread availability of antihypertensive medications and healthcare services, achieving and sustaining adequate blood pressure control remains a challenge among treated hypertensive patients. Understanding adherence to recommended hypertension care practices and factors influencing blood pressure control is essential for improving long-term cardiovascular outcomes. **Objectives:** To determine the proportion of treated hypertensive patients achieving optimal blood pressure control, assess adherence to recommended hypertension care practices, and identify factors associated with blood pressure control. **Methods:** A hospital-based cross-sectional study was conducted among 258 known hypertensive patients attending the outpatient department of a tertiary care teaching hospital in Chengalpattu district, Tamil Nadu. Data were collected using a pretested semi-structured questionnaire and analysed using SPSS version 27.0. Descriptive and inferential statistical analyses were performed to assess factors associated with blood pressure control. **Results:** The mean age of participants was 56.3±13.9 years and 65.1% were females. Optimal blood pressure control was achieved among 53.1% of participants. Regular intake of antihypertensive medications was reported by 91.1%, while 46.5% adhered to recommended hypertension care practices. Blood pressure control was significantly associated with age ($p=0.044$) and regular medication intake ($p=0.043$). Awareness of government-supported hypertension services was observed among only 10.9% of participants. Major barriers to optimal hypertension care included poor awareness of available services, irregular medicine availability, prolonged waiting time, and low confidence in public health facilities. **Conclusion:** Only about half of the treated hypertensive patients achieved optimal blood pressure control despite high self-reported medication adherence. The findings highlight a gap between treatment uptake and treatment outcomes and underscore the need to strengthen adherence to recommended care practices, promote regular blood pressure monitoring, and improve utilization of government-supported hypertension services. **Keywords:** Hypertension; Medication Adherence; Blood Pressure; Health Services Accessibility; Chronic Disease

Registration ID: IPHA-TNCON-005

Title: Survival Analysis of Early Weaning (0–6 Months) Among Infants in Rural and Urban Field Practice Areas: A Prospective Follow-up Study.

Author: Dr R. Nivetha¹¹Department of Community Medicine, PSP Medical College and Hospital and Research Institute, Kanachipuram.

Background: Exclusive breastfeeding for the first six months of life is strongly recommended for optimal infant growth and development. However, early initiation of complementary feeding remains a major public health concern in developing countries. Objectives: To estimate the time to early weaning among infants and identify predictors associated with early initiation of complementary feeding using survival analysis techniques. Methodology: A prospective follow-up study was conducted among 450 mother–infant dyads using multistage simple random sampling from selected rural and urban practice areas of a tertiary care hospital in Kanchipuram, Tamil Nadu, between April 2024 and May 2025. The data were collected using Epicollect software with a semi-structured questionnaire that captured demographic characteristics and follow-up data on breastfeeding practices for 6 months. The Kaplan–Meier survival analysis and Cox proportional hazards regression were used to evaluate the hypothesis. Results: Among 450 infants, 283 (62.9%) experienced early weaning. The median survival time to early weaning was 5.4 months, while the mean survival time was 4.9 months. Maternal education, place of delivery, and birth weight were significant predictors of early weaning. Conclusion: Nearly two-thirds of infants underwent early weaning before six months. Strengthening breastfeeding counselling and maternal support interventions is essential. Keywords: Early weaning; Exclusive breastfeeding; Survival analysis; Kaplan–Meier; Cox regression

Registration ID: IPHA-TNCON-008

Title: A Mixed-Method Study of Medical Students at Tirunelveli Medical College Hospital regarding their Preferences for Physical Versus Digital Study Resources.

Author: Dr A. Keerthana

Background: Rapid technological advancements have introduced an influx of digital learning tools into undergraduate medical education, prompting an evolution in students' pedagogical strategies. While digital platforms offer portability and rapid search ability, traditional physical textbooks remain critical for deep memory consolidation. **Objectives:** To analytically evaluate the preferences for physical versus digital study resources Professional Year III medical students, identify task-dependent modality shifts, and correlate these pedagogical choices with perceived academic outcomes and study efficiency. **Methods:** A mixed-methods study design was employed among Professional Year III MBBS students at Tirunelveli Medical College Hospital (TvMCH), Tamil Nadu. The quantitative component collected data from 167 validated participants using a structured, self-administered questionnaire; descriptive statistics profiled demographics and study habits, while inferential analyses (Spearman's rank-order correlation and Pearson's Chi-Square test) assessed relationships between study hours, pedagogical modalities, and academic outcomes. The qualitative component comprised in-depth semi-structured interviews with seven purposively selected students, analysed via inductive thematic coding to generate 42 codes, 18 sub-themes, and 6 major themes. **Results:** The cohort (N=167; 53.9% male) demonstrated a dominant overall preference for a blended learning approach (70.7%). Modality preferences were highly task-dependent: students favored digital resources for the initial acquisition of new topics (26.3% vs. 18.6% for physical) but shifted heavily to physical resources for exam revision (29.9% vs. 19.2% for digital). A statistically significant positive correlation was identified between physical and digital study hours ($\rho = 0.211$, $p = 0.0076$), indicating a synergistic rather than substitutive relationship. Increased digital study hours correlated significantly with improved perceived efficiency ($\rho = 0.273$, $p = 0.0005$) and academic performance ($\rho = 0.209$, $p = 0.0081$), without correlating with an increase in digital distraction ($\rho = -0.095$, $p = 0.2335$).

Registration ID: IPHA-TNCON-014

A Cross-Sectional Analysis of Psychological Wellbeing and Academic Performance Among Undergraduate Medical Students in a Tertiary Care Medical College, Chennai.

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Introduction: Medical students are highly susceptible to psychological morbidity owing to the extensive academic workload and stress associated with medical training. Such psychological stress may influence their academic achievement and overall performance in medical school. This study was conducted to assess the psychological well-being of third-year undergraduate medical students and to examine its association with their academic performance. **Material & Method:** This cross-sectional study was carried out in Chennai, Tamil Nadu, in a tertiary care medical college and hospital from August to September 2022. After receiving approval from the Institutional Research Committee (IRC) and Institutional Ethics Committee (IEC), the data was obtained using the WHO Psychological Well-Being Index from 100 third-year undergraduate medical students who fit the selection criteria and the internal assessment marks of the selected students from the community medicine department. The chi-square test as well as other descriptive statistics were carried out by SPSS V-20. **Result:** Sixty-six per cent of students were between the ages of 20 and 21, with a mean age of 21.27 ± 1.06 years. Females made up 72% of the responses. Around 24% of students scored below 50% on the well-being index. Psychological discomfort was high (28%) among males than female students (22%). In the internal assessment exam, nearly 72% of participants scored less than 50%, with the total mean score for students being $41.62 \pm 15.12\%$. The academic achievement of third-year MBBS students as measured in average (22%) and distinction grades (4%) was found to have a statistically significant association with their good and excellent psychological well-being ratings. **Conclusion:** This study demonstrated a significant association between academic achievement and psychological well-being among medical students in South India. Hence, in order to improve the academic performance of medical students, their psychological well-being need to be given due consideration in the medical education curriculum and medical institutions to implement appropriate strategies to maintain positive mental health of the students. **Key Words:** South India, Mental health, Students

Registration ID: IPHA-TNCON-015

Title: Post-Acute Sequelae of SARS-CoV-2 infection in South Indian Population: A Cross-Sectional Study

Author: Dr. Austoria A. J. Associate Professor, Department of Community Medicine, KMMC Medical College and Hospitals, Muttom, Kanyakumari, TN.

Introduction: COVID 19 pandemic had affected millions around the world since December 2019. It had burdened the healthcare system and the health care workers in all the aspects of preventive, promotive and curative services. When the healthcare system is striving to control the COVID-19 infections, there is another entity which has become a challenge for them i.e. Post-Acute Sequelae of SARS-CoV-2 infection (PASC). There have been many instances of healthy people developing new health complications or being diagnosed with new non-communicable diseases post Covid-19 infection and some have even faced sudden death within months after recovering. This study was done with the objectives **1.** To study the Post-Acute sequelae of SARS-CoV-2 infection among COVID-19 patients. **2.** To describe the factors associated with PASC. **3.** To study the effect of vaccination status on PASC. Methodology: This cross-sectional study was done in 2022 at a Medical College in Kanyakumari, after approval from the Institutional Human Ethics Committee. 166 Patients who had contracted Covid-19 during 1st 2nd or 3rd waves and had visited our healthcare center for treatment were included. Data were collected by Semi-structured interview schedule over phone, entered in MS Excel and analyzed using SPSS v20.0. Results: The mean age of the study participants was 35.96 ± 14.988 years with minimum age 11 years and maximum age of 83 years. The prevalence of PASC (at least one symptom of PASC) among the study participants was 77.7%. Musculoskeletal PASC was the most common PASC reported. Female gender had significant association with sleep disorders, hair fall, mental health, respiratory, GIT and neurological PASC. Chronic illness was significantly associated with GIT PASC. Patients who started physical activity after COVID 19 infection had significant association with GIT PASC. Loss of taste increased with increase in number of attacks. On comparing the prevalence of PASC in the vaccinated and unvaccinated it was observed that those who were vaccinated had decreased incidence of neurological PASC(46.1%), GIT PASC(42.1%) , Hair fall PASC(42.1%) ,and headache(31.6%) while having increased incidence of Musculoskeletal PASC(57.9%) , Sleep disorders(56.6%) and Mental health related PASC(56.6%) and all these findings were statistically significant.

Registration ID: IPHA-TNCON-017

Title: Suicide Among Students - A Content Analysis of Newspaper Reports

Dr. Swathi V Koramboor, Assistant Professor, PSPMCHRI, Oragadam

Background Student suicide is a major public health concern globally and in India, with academic pressure, family expectations, and mental health issues frequently cited as contributing factors. Newspaper coverage of suicide can shape public perceptions, influence help-seeking, and potentially contribute to suicide contagion, underscoring the need to understand how student suicides are portrayed in the media. **Objectives:** To analyse the content of newspaper reports on suicides among students, with specific objectives to: 1. describe socio-demographic and circumstantial characteristics of reported student suicides, 2. Identify commonly reported precipitating factors and methods. **Materials and Methods:** A cross-sectional content analysis was conducted of all newspaper articles reporting suicides among students published in selected English dailies over a defined one-year period of April 2025- March 2026. Articles were retrieved using predefined search terms and screened using inclusion and exclusion criteria. A structured coding proforma, was used to extract information on victim characteristics, contextual factors, suicide method, hospitalization and survival. Data were entered into a spreadsheet and analyzed using descriptive statistics. **Results** The analysis included 206 articles of student suicides reported all over India during the period of April 2025- March 2026. The majority of reported deaths involved adolescents and young adults, most commonly in the late teenage to early twenties age group, with a higher proportion of female victims. Academic-related issues, family or relationship problems, and mental health concerns such as stress and depression were the most frequently cited reasons for suicide, although explicit mention of a mental disorder was uncommon. Hanging and jumping from high rise buildings were the most commonly reported methods of suicide. **Conclusion:** Newspaper coverage of student suicides tends to emphasize individual and academic stressors, frequently includes detailed descriptions of suicide methods, and seldom provides information on mental health support or crisis resources. Strengthening collaboration between mental health professionals, public health authorities, and the media, alongside capacity-building on responsible suicide reporting, is essential to reduce potential harmful effects and promote preventive messaging in reports of student suicide. **Keywords:** *Student suicide, Content Analysis, Newspaper article*

Registration ID: IPHA-TNCON-047

Title: Trend Analysis of Malaria and Dengue in a Tertiary care hospital in North Karnataka: A 5-year retrospective study

1. Dr Siva Keerthika S, Senior Resident, Department of Community Medicine, ESIC Medical College, Gulbarga 2. Dr Santosh Biradar, Professor, Department of Community Medicine, ESIC Medical College, Gulbarga

Background: Vector-borne diseases are illnesses caused by parasites, viruses and bacteria that are transmitted by vectors. The burden of these diseases is highest in tropical and subtropical regions. Understanding the trends and distribution of mosquito-borne diseases is crucial for effective control and prevention strategies. Trend studies provide valuable insights into disease patterns, helping policymakers and healthcare professionals develop targeted interventions. **Objectives:** 1. To analyze the trend of malaria and dengue cases in a tertiary care center in North Karnataka from 1st October 2020 to 30th September 2025. 2. To determine the seasonal variation of malaria and dengue cases. 3. To identify demographic factors associated with malaria and dengue cases. **Methodology:** The present study was a retrospective descriptive study conducted in a tertiary care hospital, North Karnataka. The data pertaining to 1st October 2020 to 30th September 2025 (5 years) was collected from the Case sheets of medical records department. The confirmed cases of malaria and dengue were included in the study. The collected data was entered in Microsoft excel and analyzed for frequency, percentage and Chi-square for statistical significance. **Results:** A total of 460 dengue cases and 25 malaria cases were reported during the study period. The highest number of dengue cases was reported in 2023–24 (173; 37.6%), followed by 2020–21 (98; 21.3%). Cases declined from 2020–21 to 2022–23, increased in 2023–24, and decreased again in 2024–25. Malaria cases remained low throughout the study period, with no reported cases in 2020–21. However, an increase was observed in 2024–25 (18 cases). The dengue and malaria cases occurred more during monsoon season. **Conclusion:** The study findings revealed that dengue cases are more compared to malaria, but the trends were fluctuating. It was observed that both Dengue and Malaria cases were more during monsoon season. **Keywords:** Malaria, dengue, trend analysis

Registration ID: IPHA-TNCON-048

Title: Assessment of Nutritional Status Among Under-Five Children Discharged from Nutritional Rehabilitation Centre of Raipur District: A Longitudinal Study

Author's Name: Dr B Nithesh, Assistant Professor, Department of Community Medicine, Melmaruvathur Adhiparashakthi Institute of Medical Sciences, Melmaruvathur
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Background: Malnutrition indicates an imbalance in an individual's energy intake and /or nutrients. It is associated with both morbidity and mortality. The morbidity pattern in India is comparatively higher than the other countries which can be reduced by follow up interventions. Nutritional Rehabilitation Centers (NRC) provide therapeutic nutritional care, and the mothers are counseled and trained on various aspects of appropriate child feeding and caring practices. Severely acute malnourished children need long-term care and follow-up should be done to ensure continued weight gain, health, and well-being and to reduce mortality. Hence this study was conducted to assess the nutritional status of the children discharged from the NRC during the 2nd and the 5th month of the post discharge period. **Methodology:** A Prospective follow-up/ longitudinal study among the children discharged from NRC. The study was carried out for a period of 18 months on children who were discharged from NRCs in the last 2 months. Data was collected by semi structured questionnaire & entered into Microsoft Excel and analyzed using Stata version 13. **Results:** The anthropometric difference of the children between the 1st and the 2nd visit were found to be statistically significant ($p < 0.001$). **Conclusion:** Our results signify the importance of emphasizing the need for regular follow-up visits. The grassroot level workers should ensure that the follow-up visits are undertaken by regular home visits and health education. **Key Words:** Nutritional status, Nutritional Rehabilitation Centre, Malnutrition

Registration ID: IPHA-TNCON-072

Title: Aggressive Behaviour Patterns and their Association with Blood Pressure among Postmenopausal Women: A Community-Based Study from rural Chennai

Author – Dr. Hetal Tejas Mer

Background: Aggression in postmenopausal women is found to contribute in rising of blood pressure, thereby increasing cardiovascular risk. This study aims to assess patterns of aggression among postmenopausal women using Buss–Perry Aggression Questionnaire (BPAQ) and to examine its association with their blood pressure levels. **Methodology:** A community based cross-sectional study was conducted among 120 postmenopausal women from rural area. BPAQ scores were assessed across four subdomains: physical aggression, verbal aggression, anger, and hostility. Association between BPAQ scores with blood pressure level and other study variables were analysed using Chi-square test and Bivariate correlation analysis. **Results:** (40.8%) of the participants had aggression score "Above Average." Aggression score was 'Very High' in (7.5%) of them. Comparing across subdomains, highest level of aggression was observed in hostility domain (average score = 3.04), followed by verbal aggression (average score = 2.92). (55%) of the women had hypertension and it was significantly associated with Aggression score of the participants($p=0.043$) **Conclusions:** The study showed high prevalence of above-average aggression among postmenopausal women, with hostility being the predominant subdomain. Hypertension was significantly associated with higher aggression scores, emphasizing the need for early identification and integrated management to improve quality of life. **Key-words:** Postmenopause, Aggression, Hostility, Blood Pressure, Hypertension, Cross-sectional studies

Registration ID: IPHA-TNCON-077

Title: Why Gamers Cannot Stop: A Qualitative Meta-Synthesis of Facilitating Factors and Barriers to Overcoming Gaming Disorder

Author: J Jenifer Florence Mary^a, Gowtham M^b, R Prahankumar^{ca} Assistant Professor, ^bResident, ^cProfessor and Head, Department of Community Medicine, Mahatma Gandhi Medical College and Research Institute, Sri Balaji Vidyapeeth (Deemed to be University), Puducherry, India.

Background: Gaming disorder (GD), formally classified in ICD-11, is a growing behavioural public health concern, particularly among young people. Despite a rapidly expanding quantitative evidence base, the lived experience of why individuals develop disordered gaming and why cessation is difficult remains poorly understood. Qualitative research is uniquely positioned to answer these questions, yet no qualitative meta-synthesis has synthesised this body of evidence. **Objectives:** To synthesise qualitative evidence on the facilitating factors that drive and sustain GD, and the barriers that prevent cessation, with the aim of generating analytical themes. **Methods:** A systematic search of PubMed, PsycINFO, Embase, and Web of Science (January 2018 to June 2025) identified qualitative and mixed-method studies reporting participants lived experiences of facilitating factors towards or barriers in overcoming GD. A total of 11 primary studies were included. Quality was appraised using the CASP Qualitative Checklist. Thematic synthesis following Thomas and Harden's three-stage method was conducted, generating descriptive and analytical themes. **Results:** Six analytical themes were identified: Psychological and emotional drivers: escapism, maladaptive coping, and dopamine sensitisation; Social and peer ecosystem: peer initiation, squad obligation, and gaming as digital socialisation; Structural game design and industry factors: engineered engagement mechanics, pay-to-win systems, and rank-reset retention loops; Environmental and contextual facilitators: the COVID-19 pandemic, mobile-first accessibility, and esports legitimisation; Individual-level barriers to cessation: failure of self-control strategies, cognitive preoccupation, and reduced attention span; and Social and structural barriers to cessation: peer pull-back, industry retention design, and absent non-psychiatric support pathways. **Conclusions:** GD is not sustained by individual weakness alone but by a convergence of psychological vulnerabilities, peer ecosystems, and deliberately engineered structural factors. Effective intervention must simultaneously address emotional regulation needs, social dynamics, and the commercial determinants of gaming, including industry regulation of addictive design features. These findings inform multi-level public health strategies for colleges, clinicians, and policymakers. **Keywords:** Gaming disorder; Internet gaming disorder; Qualitative meta-synthesis; Thematic synthesis; Lived experience.

Registration ID: IPHA-TNCON-089

Title: Global burden of insomnia among the adolescent population: A systematic review and meta-analysis

Author: Dr. Josephine

Background: Insomnia is one of the most common sleep disorders among adolescent population. Despite the impact of poor sleep on mental, physical and academic outcomes, the importance of sleep problem remains under-recognised globally. This systematic review and meta-analysis aimed to estimate the pooled global prevalence of insomnia among adolescents. **Methods:** We conducted a systematic search in PubMed, Embase, and Scopus. Cross-sectional studies reporting insomnia prevalence among adolescent population were included. Two reviewers independently screened articles, extracted data, and assessed quality using the Joanna Briggs Institute checklist. Pooled prevalence of insomnia was estimated using a random-effects model. Subgroup analyses compared prevalence by region, income level, study setting, and assessment tools. Heterogeneity was assessed using the I^2 statistic and publication bias was evaluated using Egger's test and funnel plots. **Results:** We screened a total of 7383 studies among which forty-one studies were included in the final review. The estimated global prevalence of insomnia among adolescent population was 29% (95% CI: 22%–36%; $N=331,174$; $I^2=100\%$). However, the individual study estimates varied between 2% and 89%. Prevalence was higher in school/university-based studies (31%, 95% CI: 23%–39%,) than in community-based studies (18%, 95% CI: 10%–28%). Adolescents from lower-middle-income countries showed the highest prevalence (47%, 95% CI: 12%–84%,). No evidence of publication bias was found. **Conclusions:** Our findings suggests that insomnia is a global public health problem affecting nearly one-third of adolescents worldwide. Heterogeneity in results from individual studies may limit the generalisability of the pooled prevalence. These findings call for the need for integrated sleep health promotion in schools, primary care settings, and public health policy. **Key words:** Insomnia, Prevalence, Burden, Adolescents, Review

Registration ID: IPHA-TNCON-090

TITLE:

Food Label Utilization and Its Influence on Buying Decisions: A Cross-Sectional Study in Theni

Author: Saranya Sivanesan¹, VeeraKumar², Aparna³, Ashmitha R⁴

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BACKGROUND: There is an increase in the manufacture and consumption of prepackaged foods as a result of widespread urbanization, long working time, and adaption to a sedentary lifestyle. The majority of these prepackaged foods contain food labels exhibiting trademarks, brand names, nutritive information, pictorial matter, or symbols relating to the food products. Hence it is necessary to assess the practices related to the purchase of packaged foods and to evaluate the utilization patterns and understanding of food labels among adults, in order to identify gaps in consumer awareness

METHODOLOGY: A community based cross sectional study was conducted among adults in the rural field practice area of tertiary care hospital in the selected village. The sample size of 110 participants were included by simple random sampling. Ethical committee approval was obtained. semi-structured pre-designed questionnaire was administered to the study participants after obtaining informed consent form. Basic demographic details like age, gender, occupation, area of residence was collected. Details regarding assessment of consumer's awareness and utilization pattern of food labels and its effect on purchasing behaviour was obtained. **RESULTS:** The study included 110 participants from Aundipatti village. Majority of participants were purchasing food for their family. 97 (88.2%) of study participants preferred to purchase food with food labels **and** were influenced by the price to buy packaged food the most. Among them only 40% were reading the food label because of lack of time. Majority of the people were not able to recognize FSSAI logo , AGMARK logo , FPO logo on the package , logo for fortified foods on the package of certified fortified foods , logo for organic foods on the package of certified organic foods. **CONCLUSION:** Our study indicates a better level of preference to purchase food with labels, but habit of reading the food label is low. **KEY WORDS:** Food label, Utilization, Packed foods, Theni

Registration ID: IPHA-TNCON-095

Title: Effectiveness of flipped classroom to improve learning and academic performance in healthcare professional education in India – A Systematic Review and Meta-Analysis

Author: Dr. Reena Mohan

Background: Flipped classroom (FC) is a learner-centred approach where content is delivered outside class and in-class time is used for active learning. It improves higher-order thinking, engagement, and supports competency-based healthcare education. Though effective globally, evidence in India is limited. This review evaluates its impact on academic performance and student satisfaction. **Methods:** A systematic review and meta-analysis was conducted as per PRISMA and registered in PROSPERO. Interventional studies from India comparing flipped and traditional classrooms among healthcare students were included. Databases searched included PubMed, Scopus, Cochrane, Web of Science, and Google Scholar. Academic performance was the primary outcome and satisfaction secondary. Data were analyzed using RevMan with random-effects model and SMD (95% CI). **Results:** Fourteen studies were included (FC: 1081; TC: 1095). The pooled analysis showed a statistically significant improvement in academic performance with the flipped classroom (SMD = 1.44; 95% CI: 0.74–2.14; $p < 0.00001$), indicating a large effect size. However, heterogeneity was very high ($I^2 = 98\%$), reflecting variability in study design, implementation, and assessment methods. Subgroup analysis revealed no significant difference between medical and dental students ($p = 0.33$), suggesting consistent effectiveness across disciplines. Publication bias was detected (Egger's test $p < 0.05$). Student satisfaction was consistently higher with FC, ranging from 57% to 95%. Overall, despite heterogeneity and potential bias, the findings strongly favor the flipped classroom over traditional teaching methods in improving learning outcomes. **Conclusion:** Flipped classroom is an effective teaching-learning strategy that improves academic performance and student satisfaction among healthcare students in India. Its large effect size supports integration into competency-based education. However, high heterogeneity and publication bias require cautious interpretation. Standardized, large-scale studies are needed. Overall, FC is a promising approach to enhance learning outcomes in healthcare education.

Registration ID: IPHA-TNCON-098

Title: Determinants of Successful NP-NCD Digital Ecosystem Utilization: A Matrixed Multiple Case Study from Puducherry

Dr Nandu Krishna J¹, Dr Sony Thomas¹, Elakeya Udhaya Subramanian¹, Dr James T D¹, Dr Subitha L²¹ Consultant, DIGICARE Project, Dept of PSM, JIPMER² Principal Investigator (DIGICARE Project) & Professor, Dept of PSM, JIPMER

Background Despite national scale-up of the NP-NCD digital ecosystem, routine adoption and utilization remain fragmented across primary healthcare facilities in India. Understanding factors associated with successful implementation is essential for optimizing digital NCD services and informing scale-up. **Objectives** To identify determinants and implementation strategies associated with successful NP-NCD digital ecosystem utilization. **Methods** A Matrixed Multiple Case Study (MMCS) was conducted across ten facilities (3 PHCs and 7 SHCs) in Puducherry district. During the 9-month formative phase, facility, knowledge and data quality assessments and contextual interviews were undertaken. Data were analysed using a DIGICARE-adapted CFIR 2.0 coding framework in NVivo. Determinants were synthesized into six implementation domains and informed six context-specific implementation strategy packages piloted between December 2025 and May 2026. Facility performance was assessed using monthly indicators related to continuum-of-care. Facilities were classified as high, medium and low-performing implementation cases based on composite implementation performance scores. Within-case analyses characterized determinant–strategy profiles, followed by cross-case matrix comparisons. **Results** Implementation performance varied substantially across facilities despite a common programme environment. Within-case analyses demonstrated distinct determinant–strategy profiles. Cross-case matrix comparisons identified six determinant domains related to workflow integration, workforce capability, patient identity management, governance processes, technical enablement and continuity-of-care systems. High-performing facilities consistently demonstrated stronger governance, workforce capability, workflow integration and technical enablement, whereas lower-performing facilities were characterized by persistent workflow fragmentation, limited technical support and weaker monitoring structures. These determinant–strategy combinations emerged as key differentiators of successful NP-NCD digital ecosystem utilization. **Conclusions** The MMCS approach enabled systematic identification of factors differentiating higher- and lower-performing facilities and generated implementation evidence on determinant–strategy combinations associated with successful utilization of the NP-NCD digital ecosystem. Findings may inform optimization and scale-up of digital NCD services. **Keywords:** Matrixed Multiple Case Study; CFIR 2.0; NP-NCD; Digital Health; Implementation Science

Registration ID: IPHA-TNCON-103

Dr. Prathyusha Kadijala

Title: Evaluating health literacy: a cross-sectional study among urban chennai residents using the newest vital sign (nvs)

Background: Health literacy is essential in public health, empowering individuals to find, understand, and utilize health information for informed choices. Patients often visit doctors or are hospitalized, requiring them to follow instructions, make treatment choices, and manage their health after discharge. In a fast-paced hospital setting, they receive information from multiple healthcare providers in a very short time. Enhancing health literacy through clear communication and accessible resources is essential for improving public health outcomes. Hence this study was aimed to assess health literacy levels and identify associated factors among the urban population in Chennai, using the Newest Vital Sign (NVS) tool. **Methods:** A Community-based cross-sectional study design was conducted among 400 adults with the ability to read and comprehend either English or Tamil in urban field practice area by using systematic random sampling. **Results:** This study reveals concerning gaps in health literacy among urban Chennai residents, with only 24.3% demonstrating adequate health literacy. A significant proportion of participants (26.5%) had a high likelihood of limited health literacy, and 49.3% showed a possibility of limitation. Among those with chronic health conditions—a group requiring sustained engagement with the healthcare system—only 11.1% had adequate health literacy, highlighting a critical area for intervention. Statistically significant association with health literacy was found with age, gender, type of hospital, and presence of chronic health condition. **Conclusion:** The study shows the significant gap with respect to health literacy among adults of Urban Chennai. Integrating a simple, validated screening tool like the Newest Vital Sign (NVS) into routine clinical workflows, can help healthcare providers tailor communication and dedicate more time to those who need it most. This approach is especially vital for individuals with chronic diseases and can significantly enhance patient understanding, treatment adherence, and overall health outcomes.

Registration ID: IPHA-TNCON-009

Title: A comparative study on Knowledge, Attitude, Practice of solid waste disposal among rural and urban households of Chengalpattu District, Tamil Nadu

Author : Dr. Gayathri Rajendran, final year postgraduate, department of community medicine, Tagore medical college and hospital

Background: Improper waste disposal is an important public health and environmental concern, especially in developing countries. Knowledge, attitude and practices regarding solid waste management vary between rural and urban populations and influence effective waste disposal practices. **Objective:** To assess and compare the knowledge, attitude and practices regarding solid waste management among rural and urban populations. **Methodology:** A community based cross sectional study was conducted among 200 rural and 200 urban participants. Data collected using a structured questionnaire. Statistical analysis was performed using descriptive statistics, chi square. **Results:** overall adequate knowledge was higher among urban participants (79.2%) compared to rural participants (71.4%). Positive attitude towards solid waste management was also higher among urban participants (85.8%) than rural participants (75.9%). Similarly, good waste management practices were common among urban participants (80.2%) compared to rural participants (65.0%). **Conclusion:** urban residents had better knowledge, attitude and practices regarding solid waste management compared to rural residents. Strengthening awareness programmes, behavioural change communication and improving waste management infrastructure, particularly in rural areas, are essential for promoting safe and sustainable waste disposal practices. **Keywords:** solid waste management, knowledge, attitude, practice, rural population, urban populations, waste segregation, waste disposal, recycling

Registration ID: IPHA-TNCON-020

Title: Prevalence and associated factors of domestic violence among married women in an urban slum in Chengalpattu district: A Cross-sectional study

Author: Dr. Vaishnavi A¹, Dr. Raja D² Second year postgraduate, Professor, Department of Community Medicine, Chettinad Hospital and Research Institute, Chennai.

Background: Violence against women is a major public health problem and a violation of women's human rights. Violence can negatively affect women's physical, mental, sexual, and reproductive health. Despite being a punishable offense, Domestic violence (DV) is still on the rise in India. The victims of DV tend to use health care services frequently. Primary care physicians are the first point of contact for these women. **Objectives:** 1. To estimate the prevalence of domestic violence among married women of an urban slum in Chengalpattu district. 2. To find out the factors associated with the prevalence of domestic violence. **Methods:** A Cross-sectional study of 3 months duration was conducted amongst 200 married women in the age group 18–59 years residing in an urban slum area of Semmencheri, Chengalpattu. Participants were selected using simple random sampling and a pretested semi-structured questionnaire was administered after obtaining informed consent. Analysis was done using SPSS version 27. P-value of < 0.05 was considered statistically significant. **Results:** Among the 200 study participants, 72 women (36.0%) reported experiencing domestic violence. Domestic violence was more common among women aged 18–30 years (42.2%) than those aged above 30 years (33.1%). A significant association was observed between husband's educational status ($OR = 3.37$, $p = 0.006$) and husband's alcohol consumption ($OR = 2.29$, $p = 0.013$) with domestic violence. Financially dependent women had higher odds of experiencing domestic violence ($OR = 2.35$, $p = 0.005$). **Conclusion:** The prevalence of domestic violence among married women in the study population was 36.0%. Husband's alcohol consumption, lower educational status of the husband, and financial dependence of women were significantly associated with domestic violence. Strengthening women's economic empowerment, promoting education, and addressing alcohol-related problems may help reduce the burden of domestic violence in the community. **Keywords:** Violence against women, Domestic violence, intimate partner violence, domestic abuse

Registration ID : IPHA-TNCON-038

Title : “ Knowledge , Attitude & Practices regarding Biomedical Waste Management among Nursing & Paramedical students in a Tertiary care hospital in Chengalpattu District.”

Author: Dr. Purushothaman . M., Second year Post Graduate, Department of Community Medicine, Chengalpattu Medical College, Dr. G. Aravind, MD., Senior Assistant Professor Department of Community Medicine, Chengalpattu Medical College.

Background : “Biomedical waste is waste generated during diagnosis, treatment, or immunization of human beings or animals, or in research activities pertaining thereto, or in the production and testing of biological and is contaminated with human fluids”. Inadequate and insufficient knowledge concerning biomedical waste management have excessive potential for injury and life threatening infections.**Objectives :** 1. To assess the knowledge, attitude and practices (KAP) regarding Biomedical Waste Management among paramedical students 2. To find out the Association between selected variables and KAP. **Methodology :** A cross-sectional study was conducted among Nursing & Paramedical (Medical Lab Technology & Respiratory Therapy) students in a Tertiary care hospital in Chengalpattu District. Study population was selected by Convenience sampling and data was collected using a validated self-structured questionnaire through Google forms. Based on the study done by Surya Kant Tiwari et al , the sample size was calculated as 130. The data was entered in MS Excel and analyzed using SPSS Version 25**Results:** Among 130 students, 105 (80.8%) are having Good knowledge, and 13(10%) having moderate and 12 (9.2%) having poor knowledge regarding Biomedical Waste Management. 123(94.60%) students showed positive attitude and 7 (5.40%) showed negative attitude. Overall 97 (74.60%) students are following good practice and 33(25.4%) following bad practices.**Conclusion :** .From this study , we conclude that still there are existing gaps in knowledge and practices regarding BMWM. So Training sessions and CME programmes regarding BMWM should be conducted at periodic intervals for students and healthcare workers in all Health care facilities for smooth functioning of our health system.**Key words:** Biomedical Waste Management, Knowledge, Attitude, Practice

Registration ID : IPHA-TNCON-039

Title: A Cross-Sectional Study on Unmet Need of Family Planning Among Eligible Couples in Tiruvannamalai District

Author: Dr. Kavya S Nair , 2nd Year Post Graduate, Co-investigator: Dr. Kalaivanan R, Assistant Professor, Dr. A Balaji , HOD & Professor, Department of Community Medicine, Arunai Medical College and Hospital, Tiruvannamalai

Background: Unmet need for family planning continues to pose a public-health challenge, reflecting the gap between fertility intentions and contraceptive use. Despite progress under India's National Family Welfare Programme, variations persist at the district level. Tiruvannamalai district, with its predominantly rural population and sociocultural diversity, requires updated evidence to guide reproductive-health interventions. **Objectives:** To estimate the prevalence of unmet need for family planning among eligible couples in Tiruvannamalai district and to assess the factors associated with unmet need. **Materials and Methods:** A community-based cross-sectional study was conducted among married women aged 15–49 years in selected rural and urban areas. Using multistage sampling, 130 eligible couples were included. Data were collected through house-to-house interviews using a pretested semi-structured questionnaire. Descriptive statistics were generated, and associations between unmet need and sociodemographic variables were assessed using the chi-square test. Analysis was performed using SPSS V.23. **Results:** The prevalence of unmet need for family planning was 11 (8.5%). Nearly half of the respondents (47.6%) were aged ≥ 35 years, and the sample had equal rural and urban representation. Significant associations with unmet need were found for respondent's age ($p = 0.032$), place of residence (higher in urban areas; $p = 0.004$), husband's occupation ($p = 0.005$), wife's education ($p = 0.025$), and contact with health workers ($p = 0.003$). Women with no recent health-worker interaction had a higher unmet need, highlighting gaps in counselling and outreach. **Conclusion:** The observed unmet need is comparable to state estimates but remains a concern. Sociodemographic factors and inadequate frontline health-worker engagement significantly influence unmet need. Strengthening counselling, improving outreach particularly in urban pockets and focusing on women with lower educational status may enhance contraceptive uptake and support local reproductive-health programme goals. **Keyword** Unmet need, Family planning, Eligible couples, Tiruvannamalai, Reproductive health

Registration ID : IPHA-TNCON-040

Title: Exploring Health Insurance Coverage and Out-of-Pocket Healthcare Expenditure among Urban Households in Tiruvannamalai: A Qualitative Study

Principal Investigator: Dr. R. Vidhya, 1st yr Post Graduate, Community Medicine Department

Co- Investigator: Dr. S. Sakthi Priyan Assistant Professor, Department of Community Medicine

Guide: Dr. A. Balaji Professor, Head of the Department, Department of Community Medicine, AMCH

Background: Health insurance covers medical expenditure during hospitalization. Urban poor households, mostly living in overcrowded, unplanned settlements and experiencing dual burden of increasing healthcare needs and financial strain. There is need to assess health insurance coverage, experiences among them. **Objectives:** To explore perceptions, experiences, and factors influencing health insurance coverage and out-of-pocket healthcare expenditure among urban households.

Materials and Methods: A Qualitative study was conducted among urban households in urban field practice area of tertiary care institute, Tiruvannamalai. Participants were selected using purposive sampling method. For In-depth interview, participants were identified from hospital records of beneficiaries who had undergone surgery under health insurance scheme during past one year. Among 32 eligible participants twenty were willing to participate and data saturation was achieved after **ten in-depth interviews**. Each interview lasted for 15-20 minutes. Additionally, **one Focus group discussion** involving seven participants covered under health insurance scheme was conducted at common place, at convenient time, lasted for 50 minutes. Data was collected using semi-structured interview guide. Interviews were audio recorded and transcripts were uploaded to ATLAS.Ti25 software for thematic analysis framework. **Results:** Totally ten in-depth-interviews and one Focus Group Discussion comprising seven participants were conducted. For **In-depth interview** four major themes and 12 subthemes were emerged. Major Themes-Household dynamics, Financial burden and Coping strategies, Utilization and Challenges of Health Insurance, Healthcare experiences and Expectations for financial protection. Five major themes and 17 subthemes emerged from **Focus group discussion** analysis. Major themes-Awareness and understanding of Health insurance and Enrolment, Positive Experiences with Utilization of Health Insurance, Barriers to Accessing and Utilizing Health Insurance, Inadequate Financial Protection and Persistent Out-of-Pocket Expenditure, Expectations for Strengthening Health Insurance Schemes. **Conclusion:** Health insurance provides partial financial protection against healthcare cost, however, Out-of-pocket expenditure remains significant burden for Urban households. Strengthening insurance coverage, simplifying administrative processes may improve financial protection and reduce healthcare related economic hardship. **Keywords:** Health insurance, out-of-pocket expenditure, in-depth interview, focus group discussion.

Registration ID: IPHA-TNCON-041

Title: Assessment of Quality of Life Among Working and Non-Working Women Using the World Health Organisation Quality of Life-BREF Scale

Principal Investigator: Dr. Deepanraj. R, 1st year Post Graduate, Community Medicine Department

Co- Investigator: Dr. Kalaivanan, Assistant Professor, Department of Community Medicine

Guide: Dr. A. Balaji Professor, Head of the Department, Department of Community Medicine

Institute: Arunai Medical College and Hospital, Tiruvannamalai.

Background: Quality of life (QOL) reflects an individual's perception of physical health, psychological well-being, social relationships, and environmental conditions. Employment status may influence these dimensions among women. This study assessed the quality of life among working and non-working women using the WHOQOL-BREF scale. **Objectives:** To assess and compare quality of life among working and non-working women. **Methods:** A cross-sectional study was conducted among 115 women. Data were collected using a structured questionnaire incorporating socio-demographic characteristics and the WHOQOL-BREF instrument. Domain scores were calculated according to WHO guidelines and analyzed using SPSS version 23. Associations between employment status and QOL domains were assessed using the Chi-square test. **Results:** Among the participants, 53.9% were unmarried and 46.1% were married. More than half had undergraduate education (52.2%), while 43.5% had postgraduate education. Most women were non-pregnant (94.8%), and 59.1% were employed. Regarding overall quality of life, 61.7% rated their quality of life as good, 28.7% as neither poor nor good, 5.2% as poor, 2.6% as very good, and 1.7% as very poor. Satisfaction with health was reported by 47.8% of respondents, whereas 27.0% were neutral and 16.5% were dissatisfied. The mean WHOQOL-BREF scores were highest in the Social Relationships domain (62.59 ± 19.02), followed by Physical Health (61.05 ± 15.04), Psychological Health (52.36 ± 14.80), and Environmental Health (39.48 ± 11.11). Comparison between working and non-working women revealed no statistically significant differences in Physical Health ($p=0.157$), Psychological Health ($p=0.764$), Social Relationships ($p=0.391$), or Environmental Health ($p=0.052$). **Conclusion:** The study demonstrated a generally favourable quality of life among women, particularly in the physical and social domains. The predominance of unmarried, educated, and non-pregnant participants may have contributed to these findings. Employment status was not significantly associated with quality of life across WHOQOL-BREF domains. Further research with larger and more diverse populations is warranted. **Keywords:** WHOQOL-BREF, Quality of Life, Women, Employment, Health.

Registration ID: IPHA-TNCON-042

Title: A Cross-sectional Study on Burnout and its Correlation with Emotional Intelligence among Nursing Students in Chengalpattu Medical College Hospital

Author Dr.Krency Denila.P, Second Year Post Graduate, Dr.R.Revathi MD, Senior Assistant Professor, Department of Community Medicine, Government Chengalpattu Medical College

Background Burnout is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. Nursing students are exposed to significant academic and clinical stress during their training, making them vulnerable to burnout that may negatively affect academic performance, emotional well-being, and quality of patient care. Emotional intelligence (EI), which refers to the ability to understand and regulate emotions, may play a protective role against burnout. Limited studies have explored the relationship between burnout and emotional intelligence among nursing students. **Objectives** 1. To assess burnout among nursing students. 2. To assess emotional intelligence among nursing students. 3. To determine the correlation between burnout and emotional intelligence. **Methods** A cross-sectional study was conducted among 150 nursing students of Chengalpattu Medical College Hospital using non-probability convenience sampling. Data were collected using a structured questionnaire comprising socio-demographic details, the Copenhagen Burnout Inventory (CBI), and the Schutte Self-Report Emotional Intelligence Test (SSEIT). Burnout & emotional intelligence scores were calculated according to standard scoring methods. Data were entered in Microsoft Excel and analysed using SPSS software using Descriptive statistics and Spearman correlation test to assess the relationship between burnout and emotional intelligence. A p-value of <0.05 was considered statistically significant. **Results** The mean age of the participants was 19.77 ± 1.32 years. The mean total burnout score was 50.12 ± 16.86 and the mean emotional intelligence score was 111.55 ± 25.19 . The mean total burnout score was 50.12 ± 16.86 and the mean emotional intelligence score was 111.55 ± 25.19 , indicating overall moderate levels of burnout and emotional intelligence among the participants. Spearman correlation analysis revealed a statistically significant moderate negative correlation between burnout and emotional intelligence ($r_s = -0.422$, $p < 0.001$), indicating that students with higher emotional intelligence experienced lower levels of burnout. **Conclusion** A significant inverse relationship exists between burnout and emotional intelligence among nursing students. Enhancing emotional intelligence through targeted educational and counselling interventions may help mitigate burnout and promote psychological well-being among future nursing professionals. **Keywords** Burnout, Emotional Intelligence, Copenhagen Burnout Inventory, Schutte Emotional Intelligence Scale, Correlation Study

Registration ID: IPHA-TNCON-045

Title: Prevalence and predictors of problematic exercise behavior among regular gym users residing in urban chennai

Author: Dr. Indhu Jannani R ¹, Dr. Anantha Eashwar ², Dr. Ramkumar³ ¹First year Postgraduate, Department of community Medicine, ²Associate Professor, Department of community Medicine, ³Assistant Professor, Department of community Medicine, Sree Balaji Medical College and Hospital, Chennai.

BACKGROUND:In the recent years urban population have increasingly focused on body aesthetics and fitness. Although rising fitness culture has led to numerous health benefits, compulsive exercise leads to behavioral conditions like exercise addiction and dependence. Despite growing concern, limited literature exists on psychological implications of problematic exercise in India. This study aims to assess the prevalence and predictors of problematic exercise behavior, among regular gym users of urban Chennai using standardized tool.**METHODS:**A cross-sectional study was conducted among gym-goers above 18 years across various fitness Centre in urban Chennai. After obtaining informed consent, data was collected using a self-administered structured questionnaire that included exercise addiction inventory (EAI). A total of 262 participants were selected using purposive sampling. Data was analyzed using descriptive statistics and inferential analysis to determine associations between problematic exercise behavior and related variables. **RESULTS:**Of 262 gym users (males:40.8%, females:59.2%), majority (72 %) reported regular gym attendance (>3 days/week). Based on the EAI, 179 (68.3%) were asymptomatic, 47 (17.9%) symptomatic, and 36 (13.7%) at risk for exercise addiction. The combined prevalence of problematic exercise behavior (symptomatic and at risk) was 31.7 %, while the prevalence of at risk for exercise addiction is 13.7%. Regression analysis revealed that male gender, younger age, higher exercise hours, body image concern, exercising to regulate mood, social comparison, and higher levels of anxiety, and obsessive passion were significantly associated with higher EAI scores (all $p < 0.05$).**CONCLUSION:** Problematic exercise behavior is notable among Chennai gym users with core symptoms such as tolerance, withdrawal, lack of control, salience being commonly endorsed on the Exercise Addiction Inventory. Targeted awareness and preventive strategies within gym settings are recommend. **KEY WORDS:** Exercise addiction, Exercise dependence, Compulsive exercise

Registration ID: IPHA-TNCON-046

Title: A Cross sectional interventional Study on Impact of a Structured Menstrual Hygiene Awareness Programme among Reproductive-Age Women working at construction site, Tiruvallur District

Author: Abarajitha Vignesh

Background: Menstrual Hygiene plays a vital component of women's reproductive health and well-being. Women employed in the construction industry often face unique challenges in maintaining menstrual hygiene due to physically demanding work conditions, inadequate sanitation facilities at worksites, limited privacy, and restricted access to menstrual health information. Poor menstrual hygiene practices can increase the risk of reproductive tract infections and negatively affect health and quality of life and work. Structured health education programmes have been shown to improve menstrual hygiene knowledge and practices; however, evidence among women construction workers in Tamil Nadu remains limited. The present study aim to assess the impact of a structured menstrual hygiene awareness programme among reproductive-age women working in the construction industry in Tiruvallur District, Tamil Nadu. **Methods:** A quasi-experimental one-group pre-test and post-test study will be conducted among reproductive-age women (18–49 years) employed at selected construction sites in Tiruvallur District. Using purposive sampling, minimum 40 participants will be recruited. Baseline knowledge regarding menstruation and menstrual hygiene practices will be assessed using a structured questionnaire. Subsequently, a structured menstrual hygiene awareness programme covering menstrual physiology, hygienic practices, use and frequency of changing absorbents, safe disposal methods, myths and misconceptions, and cervical cancer prevention will be delivered. Post-intervention assessment will be conducted using the same questionnaire. Data will be analysed using descriptive and inferential statistics, including paired t-test and Chi-square test, with a significance level of $p < 0.05$. **Expected Results:** The intervention is expected to result in a statistically significant improvement in menstrual hygiene knowledge among women construction workers. Enhanced awareness regarding hygienic menstrual practices, safe disposal methods, and menstrual health management is anticipated following the programme. **Conclusion:** The study is expected to demonstrate the effectiveness of a structured menstrual hygiene awareness programme in improving menstrual health knowledge among women working in the construction industry. The findings may support the integration of menstrual health education into occupational health initiatives and workplace welfare programmes for women construction workers. **Keywords:** Menstrual hygiene management, construction industry, women construction workers, reproductive-age women, health education, occupational health, awareness programme, Tiruvallur District.

Registration ID: IPHA-TNCON-062

Digital Divide in Healthcare: Utilization and Barriers to Telemedicine in Urban and Rural Populations

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Background: Telemedicine has emerged as an important tool for improving healthcare access; however, disparities in digital infrastructure and literacy may limit equitable utilization, particularly in rural populations. **Objectives:** To assess telemedicine utilization and identify barriers influencing its access and use among urban and rural adults. **Methods:** A community-based cross-sectional study was conducted among 200 adults (100 urban and 100 rural) using multistage random sampling. Data were collected using a pretested semi-structured questionnaire assessing awareness, accessibility, digital literacy, attitudes, and barriers to telemedicine. Statistical analyses included chi-square tests, independent t-tests, and binary logistic regression. **Results** Telemedicine utilization was significantly higher among urban participants than rural participants (74% vs. 38%, $p < 0.001$). Major barriers in rural areas included poor internet connectivity (72%), lack of internet access (61%), low digital literacy (58%), and absence of smartphones (54%). Urban participants demonstrated significantly higher telemedicine awareness and digital health literacy scores. Independent predictors of telemedicine utilization included smartphone ownership (AOR=5.00), urban residence (AOR=4.14), internet access (AOR=3.78), graduate-level education (AOR=3.25), and higher monthly income (AOR=2.64). **Conclusion** A significant digital divide exists in telemedicine access and utilization between urban and rural populations. Strengthening digital infrastructure, improving internet connectivity, and implementing digital literacy initiatives are essential to promote equitable access to telemedicine services. **Keywords:** Telemedicine, Digital Divide, Digital Literacy, Urban-Rural Disparity, Health Access

Registration ID: IPHA-TNCON-018 .

Study Title: Assessment of Sleep Quality and Its Impact on Academic Performance Among Medical Students: A Cross-Sectional Study

Author: Dr. Joanna Satya J, Postgraduate Resident, Department of Community Medicine, Trichy SRM Medical College Hospital and Research Centre, Tiruchirappalli, Tamil Nadu. Dr. Aarif, Assistant Professor, Department of Community Medicine, Trichy SRM Medical College Hospital and Research Centre, Tiruchirappalli, Tamil Nadu.

Background: Sleep quality is an important determinant of physical, mental, and academic well-being among medical students. Academic demands, lifestyle habits, and psychosocial stressors may contribute to poor sleep quality and adversely affect student health and performance. **Objectives:** 1. To assess the prevalence of poor sleep quality among undergraduate medical students. 2. To evaluate the association between sleep quality and academic performance. 3. To identify sociodemographic and lifestyle factors associated with sleep quality. **Materials and Methods:** A cross-sectional study was conducted among 286 undergraduate medical students of a tertiary care teaching institution using a self-administered questionnaire. Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI) Kessler Psychological Distress Scale, Perceived Stress Scale and Educational Stress Scale for Adolescents. Academic performance was assessed using examination scores. Data were analysed using descriptive statistics, chi-square test, independent t-test, analysis of variance and correlation analysis. A p-value of <0.05 was considered statistically significant. **Results:** The mean age of participants was 20.01 ± 1.88 years and 65.4% were females. Poor sleep quality was observed among 43.7% of students. Severe psychological distress was reported by 38.8% of participants, while 84.3% experienced moderate perceived stress. Sleep quality showed significant positive correlations with psychological distress ($r=0.475$, $p<0.001$) and perceived stress ($r=0.274$, $p<0.001$). Academic performance demonstrated a significant negative correlation with sleep quality ($r=-0.126$, $p=0.036$). A strong association was observed between poor sleep quality and psychological distress ($\chi^2=56.8$, $p<0.001$). Phase I students had poorer sleep quality and higher psychological distress compared to senior students. **Conclusion:** A substantial proportion of medical students experienced poor sleep quality and psychological distress. Poor sleep was strongly associated with higher levels of psychological distress and reduced academic performance. Strengthening sleep hygiene education and student mental health support services may contribute to improved well-being and academic success, and modify lifestyle behaviours may help improve sleep quality among medical students. **Keywords:** Sleep quality, PSQI, Academic performance, Medical students, Screen time, Caffeine intake.

Registration ID: IPHA-TNCON-026

Title: Impact of Headset Use on Hearing Thresholds among College Students: A Cross-Sectional Study Using HearWHO App

Authors Dr R Nudhan Sabarish – Final Year Post Graduate, Dr K Premanand – Head of Department & Professor Department of Community Medicine, Sri Manakula Vinayagar Medical College and Hospital, Puducherry

Background: Unsafe listening practices have emerged as an important public health concern among young adults. Excessive exposure to recreational noise may contribute to early hearing impairment, especially among college students who frequently use personal audio devices. The HearWHO mobile application developed by the World Health Organization is a screening method used for early identification of hearing risk. **Objectives:** To assess the prevalence of hearing risk among college students as identified by the HearWHO app and also to assess the pattern and duration of headset use, including type of headset, volume level and duration of use among college students. **Methods:** A cross-sectional study was conducted among 140 college students aged 18–21 years in selected colleges of Villupuram district. Data was collected using a pre-tested semi-structured questionnaire assessing socio-demographic characteristics, headset usage patterns, noise exposure and self-reported hearing symptoms. Hearing screening was performed using the HearWHO mobile application. Data was analyzed using SPSS version 27. Descriptive statistics and Chi-square tests were applied to determine associations between hearing assessment results and exposure variables. **Results:** Among the 140 participants, 77.9% reported headset use. High-volume listening was observed among 59.7% of headset users, while 45% used headsets in both ears most often. About 40.7% used headsets for 1–3 hours daily, and 20.7% had been using audio devices for more than four years. According to the HearWHO app, 70.7% had good hearing scores, whereas 29.3% required hearing checks. **Conclusion:** Prolonged duration of use, higher volume levels and frequent bilateral headset use were significantly associated with poorer hearing assessment outcomes. Early screening using digital tools like the HearWHO app can aid in identifying students at risk and promote awareness regarding safe listening practices to prevent noise-induced hearing loss. **Keywords:** HearWHO app, hearing risk, headset use, noise-induced hearing loss, safe listening practices.

Registration ID: IPHA-TNCON-044

Title: Ultrasomics in microstaging NAFLD. Making the invisible measurable: a radiomimics approach

Author: Oveyaa A E^a, Swetha N B^b, Madhumitha J R^{c**}

a- Postgraduate year 1 student, b-Associate professor, c-Assistant professor, Department of Community medicine, SBMCH

Background: Non-alcoholic fatty liver disease (NAFLD) affects a substantial proportion of the global population, and accurate staging is essential for identifying patients at risk of progression to non-alcoholic steatohepatitis and cirrhosis. Conventional ultrasound is limited by subjectivity and inability to quantify fat distribution or textural heterogeneity, which may help distinguish simple steatosis from progressive disease **Objective:** To evaluate whether computational radiomics can extract quantitative features from routine liver ultrasound that correlate with NAFLD severity and disease stage **Methods:** This retrospective study included 55 patients with documented B-mode liver ultrasound imaging and quantified hepatic fat fraction measurements. Radiomic analysis extracted multiple texture-based indices, including hepatic-renal index (HRI), hepatic steatosis/right kidney cortex ratio (HS/RK), region-of-interest-based HRI, brightness distribution indices, pixel-intensity variance, entropy-based heterogeneity parameters, and spatial fat deposition patterns. Two exploratory indices, the Gyren Index and Fat Texture Discrepancy Score (FTDS), were also developed to assess subclinical textural heterogeneity. Pearson correlation analysis was used to examine associations between radiomic features and fat fraction measurements. **Results:** HRI, HS/RK, and ROI-based HRI showed strong linear correlations with hepatic fat fraction, with correlation coefficients ranging from 0.83 to 0.97 ($p < 0.001$). FTDS and Gyren Index demonstrated even stronger correlations with moderate-to-severe steatosis phenotypes, with r values of 0.89 to 0.95 ($p < 0.001$), suggesting improved discrimination of disease severity. Entropy-based heterogeneity analysis showed increased parenchymal randomness in advanced steatosis, and spatial mapping suggested preferential fat deposition in Couinaud segments 6 and 7. **Conclusion:** Computational radiomics applied to routine ultrasound may provide objective, reproducible biomarkers for NAFLD staging and monitoring. The findings suggest that texture-based indices can detect microstructural changes not visible on conventional qualitative assessment, potentially improving early identification of progressive disease.

Registration ID: IPHA-TNCON-058

Mapping Antimicrobial Resistance Hotspots Across Human, Food, and Environmental Systems: A One Health Spatial Study

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Background:Antimicrobial resistance (AMR) is a major global health threat. Peri-urban settings, where human, food, and environmental interfaces overlap, may facilitate the emergence and spread of resistant organisms. Spatial evidence on AMR transmission across these interfaces in India remains limited. **Aim 1.**To estimate the prevalence and distribution of AMR, antimicrobial susceptibility patterns, and antimicrobial resistance genes (ARGs) across human, food, and environmental interfaces in the Poonamallee–Avadi corridor, Chennai. **2.** To estimate spatial clustering, hotspots, and predictors of AMR using geospatial analysis. **Methods:** A cross-sectional spatial study was conducted from January–March 2026 in the Poonamallee–Avadi corridor, Chennai. A total of 126 samples were collected from human (n=42), food (n=42), and environmental (n=42) interfaces and GPS-tagged. Bacterial identification was performed using MALDI-TOF, antimicrobial susceptibility testing by Kirby-Bauer disk diffusion (CLSI 2023), and ARG detection by multiplex PCR. Spatial analyses, including Kernel Density Estimation (KDE), Moran’s I, and Getis-Ord Gi* hotspot analysis, were performed in QGIS v3.28. Logistic regression identified predictors of AMR positivity. **Results:** Overall AMR prevalence was 46.0% (58/126), with similar distribution across human (45.2%), food (45.2%), and environmental (47.6%) interfaces (p=0.969). *E. coli* (23.0%) and *Salmonella* spp. (23.8%) were predominant. Multidrug resistance was observed in 96.0% of isolates, while 38.1% were extensively drug resistant. Common ARGs included **mecA** (51.4%), **su11** (47.0%), **qnrS** (46.0%), and **mcr-1** (44.1%). Significant spatial clustering was identified (Moran’s I=0.312, p<0.001), with three AMR hotspots accounting for 58.2% of AMR cases. Prior antibiotic use (aOR=3.12), food vendor proximity (aOR=2.84), and raw meat handling (aOR=2.55) were significant predictors. **Conclusion:** AMR was widely distributed across all interfaces, with significant spatial hotspots identified. Geospatial One Health surveillance can support targeted interventions and strengthen AMR control in resource-limited settings. **Keywords:** AMR, One Health, GIS, QGIS, spatial analysis, MDR, ARGs, hotspot, *Salmonella*, *E. coli*, mcr-1, mecA, Poonamallee–Avadi, Chennai

Registration ID: IPHA-TNCON-065

Evaluating the effectiveness of a novel mosquito repellent cream with extracts of *tagetes erecta*, *ceasalpinia pulcherima* and trans cinnamaldhyde for personal protection in thiruvalluvar district- a randomized control trial

Author: Dr Tharani Vasudevan-Post Graduate Department of Community Meidcine
Dr Dinesh Kumar G Professor Department of Community medicine Saveetha Medical College and Hospital

Background: Mosquito-borne diseases pose significant public health challenges in rural Tamil Nadu. While DEET is the gold standard, its use is limited by irritation, cost, and accessibility. Plant-based alternatives offer promise but lack comparative clinical evidence in field conditions. **Aim:** To evaluate the efficacy and safety of a novel herbal cream (*Tagetes erecta*, *Caesalpinia pulcherrima*, trans-cinnamaldehyde) against a standard DEET-based repellent. **Methods:** A single-blind randomized controlled trial was conducted in Mappedu village (n=98) from November 2025 to February 2026. Participants were randomized to either the herbal or DEET group. Primary outcomes included percentage protection; secondary outcomes included Mosquito Nuisance scores, skin reactions, and acceptability. Data were analyzed using chi-square, Mann-Whitney U, Wilcoxon signed-rank, and Spearman correlation tests. **Results:** Both groups showed comparable baseline demographics ($p > 0.05$). Mean daily mosquito bites were 2.3 ± 1.2 (herbal) versus 2.8 ± 1.4 (DEET; $p = 0.08$). Protection duration was similar (5.6 ± 1.3 vs. 5.9 ± 1.2 hours; $p = 0.21$). The herbal group reported significantly fewer skin reactions (4% vs. 16%; $p = 0.04$) and higher acceptability scores for odor ($p < 0.001$) and texture ($p = 0.02$). No serious adverse events occurred. **Conclusion:** The novel herbal cream demonstrated non-inferior efficacy compared to DEET, with a superior safety profile and higher acceptability. These findings support plant-based repellents as viable, affordable alternatives for endemic rural settings. Large-scale multi-center trials are recommended to validate these results across diverse environments. **Keywords:** Mosquito repellent, herbal cream, DEET, randomized controlled trial, rural health.

Registration ID: IPHA-TNCON-066

Title: Assessing the effectiveness and safety of a novel larvicidal product neodymium nanoparticles and carica papaya leaf extract on controlling aedes larvae in thiruvallur district – a community-based comparative field intervention study
Author: Dr Vijai Vignesh P Post Graduate Department of Community Medicine , Dr Buvnesh Kumar M, Professor, Department of Community Medicine , Saveetha Medical College and Hospital

Background: Dengue remains a major public health concern in tropical regions where domestic breeding of *Aedes aegypti* limits vector control. Conventional larvicides such as Abate are routinely used, but field effectiveness may decline with repeated dilution and environmental exposure. This study synthesized and evaluated neodymium oxide nanoparticles using *Carica papaya* leaf extract under community field conditions and compared them with conventional larvicide. **Methodology:** A community-based interventional study was conducted in Erayamangalam and Mappedu using 60 *Aedes*-positive breeding containers (30 intervention, 30 reference). Nanoparticles were synthesized by hydrothermal method and calcination, characterized, and laboratory-tested. Baseline household survey and larval assessment were followed by field application, 24–48hour larval evaluation, 14-day household reassessment, 21-day index container monitoring, treated water analysis and comparative cost-effectiveness assessment of both interventions. **Results:** Successful synthesis showed dose-dependent larvicidal activity with LC_{50} 7.971 ppm and LC_{90} 19.379 ppm. Field intervention achieved complete larval mortality within 48 hours without surviving larvae or pupae, while residual larvae and pupation persisted with temephos. Breeding recurrence was absent at 14 days in the intervention village. Treated water showed better physicochemical maintenance, higher cellular viability (95.4% compared with 81.6%), and complete aquatic survival (4/4 compared with 2/4 at 48 hours). Economic analysis showed lower treatment cost for 40 litres (₹0.48 compared with ₹6.94) and lower cost-effectiveness ratio (0.0048 compared with 0.0701). **Conclusion:** Neodymium oxide nanoparticles demonstrated effective larvicidal activity, biological safety, and superior field applicability over conventional larvicide. **Keywords:** Neodymium oxide nanoparticles, *Aedes aegypti*, larvicidal efficacy, field intervention.

Registration ID: IPHA-TNCON-067

Title: Evaluation of the Diagnostic Performance of RT-LAMP Compared to Conventional Methods for Detection of Dengue Virus in Suspected Febrile Patients in a Tertiary Care Hospital

Authors: Dr Rubina Mary A¹, Dr Nisha Chandru²¹Postgraduate, ²Associate Professor Department of Community Medicine, Saveetha Medical College and Hospital, Chennai

Background: Dengue is a major public health challenge requiring rapid and accurate diagnosis for effective patient management and disease surveillance. Conventional diagnostic methods have limitations related to infrastructure requirements, turnaround time, and field applicability. Reverse Transcription Loop-Mediated Isothermal Amplification (RT-LAMP) has emerged as a promising alternative for rapid molecular diagnosis. **Objectives:** To evaluate the diagnostic accuracy and operational applicability of NS2 gene-based RT-LAMP assay, including extraction-free RT-LAMP, for dengue virus detection under simulated decentralized healthcare settings. **Methods:** A multiphase diagnostic accuracy study was conducted over 18 months in a tertiary care hospital. Phase I involved development and optimization of an NS2 gene-based RT-LAMP assay. Phase IIA assessed RT-LAMP with RNA extraction against RT-PCR as the reference standard. Phase IIB evaluated extraction-free RT-LAMP under laboratory conditions simulating decentralized settings. A total of 309 suspected dengue samples were included using consecutive sampling. Diagnostic performance was assessed using sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and receiver operating characteristic (ROC) analysis. Turnaround time and operational costs were also evaluated. **Results:** Among 309 samples, 99 (32%) tested positive for dengue. The highest burden was observed among individuals aged 0–15 years (35.4%) and 16–30 years (30.3%). RT-LAMP with RNA extraction demonstrated a sensitivity of 98.3%, specificity of 96.1%, and overall accuracy of 96.8%. Extraction-free RT-LAMP showed a sensitivity of 95.2%, specificity of 94.9%, and accuracy of 95.0%. RT-LAMP significantly reduced turnaround time (30–45 minutes) compared with RT-PCR (120 minutes). Both formats demonstrated high diagnostic performance, while extraction-free RT-LAMP offered additional advantages in terms of cost-effectiveness and operational simplicity. **Conclusion:** NS2 gene-based RT-LAMP demonstrated excellent diagnostic accuracy comparable to RT-PCR for dengue detection. Extraction-free RT-LAMP maintained high performance while simplifying the testing process, making it suitable for resource-limited and decentralized settings. Integration of RT-LAMP into routine diagnostic and surveillance programs could facilitate early detection, strengthen outbreak response, and improve dengue control efforts. **Keywords:** Dengue, RT-LAMP, RT-PCR, Diagnostic Accuracy, Point-of-Care Testing

Registration ID: IPHA-TNCON-068

Title: A randomized controlled trial on the effectiveness of *Cissus quadrangularis* (pirandai) topical gel for managing arthritis-related bone pain

Author: Dr ragasrimathi r g post graduate department of community medicine ,saveetha medical college and hospital

Dr buvnesh kumar m, professor, department of community medicine ,saveetha medical college and hospital

Background: Osteoarthritis is a chronic degenerative joint disease characterized by pain, stiffness, and functional limitation. Long-term use of conventional therapies such as NSAIDs is often limited by adverse effects, highlighting the need for safer alternatives. **Methods:** A randomized controlled trial was conducted to evaluate the effectiveness and safety of *Cissus quadrangularis* topical gel in patients with osteoarthritis-related knee pain. A total of 94 participants were randomly allocated into intervention and control groups (n = 47 each). Preclinical evaluation included phytochemical analysis, antioxidant assays (DPPH, ABTS), and anti-inflammatory activity using the protein denaturation method. Clinical outcomes were assessed using the Visual Analogue Scale (VAS) and WOMAC Osteoarthritis Index. **Results:** The formulated gel showed satisfactory physical and chemical properties with good stability and homogeneity. Phytochemical screening demonstrated antioxidant and anti-inflammatory activity in vitro. Baseline characteristics were comparable, with females slightly predominant (53.2% vs 51.1%) and most participants aged 50–65 years. Mean age was similar between groups (58.6 ± 8.2 vs 59.1 ± 7.9 years). Baseline VAS scores were comparable (7.1 ± 1.0 vs 7.0 ± 1.1), and both groups showed improvement. The mean difference in WOMAC score was 1.6 with a small effect size (Cohen's d = 0.20) and was not statistically significant (p = 0.39), indicating comparable effectiveness. **Conclusion:** *Cissus quadrangularis* topical gel was safe and well tolerated, with clinical outcomes comparable to diclofenac. Although no significant difference was observed, it may be considered as an alternative option for managing osteoarthritis-related knee pain. **Keywords:** *Cissus quadrangularis*; Osteoarthritis; Topical gel; Knee pain; Herbal medicine; Anti-inflammatory activity; Antioxidant activity; WOMAC index; Visual

Registration ID: IPHA-TNCON-073

Title- Attitude of CRMI Interns towards Lesbian, Gay, Bisexual, Transgender and Queer people: A cross-sectional study in a Tertiary care medical center-Trichy.

Author: Dr. Saranya R : Second year post graduate, Dr. Divya: Associate professor, Department of Community medicine, Trichy SRM Medical College Hospital & Research centre

Background: LGBTQ+ individuals frequently experience stigma and discrimination within healthcare settings, resulting in barriers to accessing equitable healthcare services. Medical interns, as future healthcare providers, play a crucial role in delivering inclusive care. However, evidence regarding attitudes and preparedness of Compulsory Rotatory Medical Internship (CRMI) interns toward LGBTQ+ healthcare in India remains limited. **Objective:** To assess the attitudes and self-reported confidence of CRMI interns in providing healthcare to LGBTQ+ individuals in a tertiary care teaching hospital. **Methods:** A hospital-based cross-sectional study was conducted among CRMI interns at a tertiary care medical centre in Tiruchirappalli between April and June 2026. Universal sampling was employed, including interns from the June 2025–May 2026 and June 2026–May 2027 cohorts. Data were collected using a validated semi-structured questionnaire assessing demographics, confidence in managing LGBTQ+ patients, attitudes toward LGBTQ+ healthcare, and perceptions regarding undergraduate curriculum and training. Descriptive statistics and significance testing were performed. **Results:** A total of 288 interns participated (response rate: 98.6%), with a mean age of 22.1 ± 1.9 years; 51.4% were male and 47.6% female. Most participants agreed that LGBTQ+ patients deserve the same quality of healthcare as non-LGBTQ+ patients (71.4%; mean score 4.12 ± 0.95). More than half were comfortable asking about sexual orientation (53.0%) and gender identity (53.7%) when clinically relevant. However, confidence levels were substantially lower for LGBTQ+ patient care compared to general patient care. Only 25.1% reported confidence in taking sexual histories from LGBTQ+ patients, while 34.5% felt confident conducting clinical examinations. Approximately half perceived physical examinations (50.2%) and genitourinary examinations (49.1%) of transgender patients as more challenging. Formal LGBTQ+ health training was reported by a minority, and 76.0% expressed interest in receiving additional education on LGBTQ+ health issues. **Conclusion:** Although CRMI interns demonstrated generally positive attitudes toward LGBTQ+ individuals and supported equitable healthcare, notable gaps in clinical confidence persist, particularly in sexual history taking and examination of LGBTQ+ patients. Strengthening undergraduate and internship curricula through structured LGBTQ+ health education, communication skills training, and community-based learning may enhance competency and promote inclusive healthcare delivery.

Registration ID: IPHA-TNCON- 003

Assessment of gait abnormalities and postural correction in elderly using wearable sensors – a quasi – experimental study

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Background:Falls among older adults represent a pressing public health challenge, with gait abnormalities and postural instability being key modifiable risk factors. Wearable inertial sensors now allow objective quantification of mobility impairments, complementing traditional clinical tests.**AIM:**To assess gait abnormalities (mobility) and evaluate the effectiveness of a structured postural correction programme in community-dwelling elderly individuals using wearable sensor technology, at the Rural Health Training Centre (RHTC), Saveetha Medical College and Hospital, Thandalam, Kancheepuram District, Tamil Nadu.**OBJECTIVES:**Primary Objective:To assess gait abnormalities (mobility) using Timed Up and Go (TUG) test and postural instability among elderly individuals using a wearable sensor-based assessment system.Secondary Objectives:To classify the degree of postural instability among elderly individuals using wearable sensor-derived measurements.To evaluate the effectiveness of the eight-week structured lower limb strengthening and balance training programme by comparing pre- and post-intervention functional mobility and postural instability scores.To determine the association between gait impairment, fall history, fear of falling and selected variables.**Methods:**This quasi-experimental study was conducted among elderly individuals aged 60 years and above in the Rural Health Training Centre of Saveetha Medical College, Tamil Nadu. Ninety participants were recruited by random sampling, and baseline evaluation included a structured questionnaire, anthropometry, TUG test, and wearable sensor-based postural stability assessment. Participants then underwent an eight-week structured programme comprising lower limb strengthening, balance training, and fall prevention education. Of the 90 enrolled, 73 completed the intervention.**Results:**The mean age of participants was 67.5 ± 6.8 years; 52.1% were male. Joint pain (74.0%), diabetes mellitus (47.9%), and fear offalling (57.5%) were the most prevalent clinical findings. Fall historyIn the preceding year was reported by 52.1% of participants. Wearable sensor assessment identified 71.2% of participants with atleast moderate postural instability. The mean pre -intervention TUG score was 18.1 ± 4.4 s. Age was significantly correlated with TUG score ($p < 0.001$). Following the eight -week intervention, a mean TUG improvement of 2.79 ± 1.55 seconds (15.4%) which was statistically highly significant ($t = 14.5$, $p < 0.001$).**Conclusions:**Combining wearable sensor assessment with the TUG test Provided valuable characterization of gait and balance deficits. The structured exercise programme yielded clinically meaningful improvements in functional mobility and fall risk reduction. These findings support integration of sensor -guided assessment and community-based exercise interventions into geriatric care under NPHCE.**Keywords:** Gait, elderly, wearable sensors, Timed Up and Go test, Postural instability, fall prevention, quasi-experimental study, rural India.

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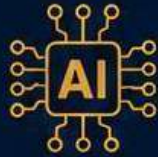
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