

ICMAHCPH 2026

International Conference on Multidisciplinary Approaches in
Healthcare, Clinical Practice and Public Health



 **26th & 27th April 2026**  **Tokyo, Japan**

Organized By



IFERP Life Sciences—Formerly Bioleagues



International Conference on Multidisciplinary Approaches in Healthcare, Clinical Practice and Public Health (ICMAHCPH-2026), Tokyo, Japan

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Conference Theme



**Health for All:
Advancing Global
Well-being through
Multi disciplinary
Collaboration**

Preface

We are delighted to extend a warm welcome to all participants attending International Conference on Multidisciplinary Approaches in Healthcare, Clinical Practice and Public Health (ICMAHCPH-2026) organized by IFERP Life Sciences—Formerly Bioleagues on April 26th–27th, 2026 in Tokyo, Japan. This conference provides a vital platform for researchers, students, academicians, and industry professionals from all over the world to share their latest research results and development activities in the field of Healthcare, Clinical Practice and Public Health. It offers delegates an opportunity to exchange new ideas and experiences, establish business or research relationships, and explore global collaborations.

The proceedings for ICMAHCPH-2026 contain the most up-to-date, comprehensive, and globally relevant knowledge in the field of Healthcare, Clinical Practice and Public Health. All submitted papers were subject to rigorous peerreviewing by 2–4 expert referees, and the papers included in these proceedings have been selected for their quality and relevance to the conference. We are confident that these proceedings will not only provide readers with a broad overview of the latest research results in Healthcare, Clinical Practice and Public Health but also serve as a valuable summary and reference for further research in this field.

We are grateful for the support of many universities and research institutes, whose contributions were vital to the success of this conference. We extend our sincerest gratitude and highest respect to the many professors who played an important role in the review process, providing valuable feedback and suggestions to authors to improve their work. We also extend our appreciation to the external reviewers for providing additional support in the review process and to the authors for contributing their research results to the ICMAHCPH-2026.

We express our gratitude to the keynote and individual speakers and all participating authors for their dedication and hard work. We also sincerely appreciate the efforts of the technical program committee and all reviewers, whose contributions made this conference possible. Finally, we extend our thanks to all the referees for their constructive comments on all papers, and we express our deepest gratitude to the organizing committee for their tireless work in making this conference a reality.

About ICMAHCPH 2026

International Conference on Multidisciplinary Approaches in Healthcare, Clinical Practice, and Public Health (ICMAHCPH-2026), scheduled for 26th & 27th April 2026 in Tokyo, Japan, will bring together leading healthcare professionals, researchers, policymakers, and industry experts to explore innovative solutions for global health challenges. Guided by the theme “Health for All: Advancing Global Well-being through Multidisciplinary Collaboration”, the conference will serve as a dynamic platform for knowledge exchange, collaborative networking, and the advancement of integrated approaches that enhance healthcare systems, improve clinical practices, and strengthen public health worldwide.

Objectives of the Conference

- » Foster interdisciplinary dialogue on emerging research, technologies, and practices that contribute to the advancement of healthcare and life sciences.
- » Promote Sustainable Development Goals (SDGs) through the integration of scientific innovation and evidence-based healthcare solutions.
- » Encourage international collaboration in addressing global health disparities, environmental health risks, and the need for resilient healthcare systems.
- » Showcase cutting-edge research and technological advancements that drive sustainable progress in fields such as biotechnology, medical research, environmental sciences, and public health.
- » Provide a nurturing environment for early-career researchers and professionals to network, gain visibility, and receive constructive feedback from international experts.
- » ICMAHCPH-2026 aspires to bridge the gap between research and real-world impact, contributing meaningfully to global sustainability and improved health outcomes across diverse populations.

Benefits of the Conference

- » Networking Opportunities Connect with leading experts, researchers, and practitioners from around the globe. Build relationships that can foster collaboration and enhance your professional network.
- » Knowledge Exchange Gain insights into the latest innovations and research findings in life sciences and healthcare. Engage with thought leaders through keynote speeches, panel discussions, and workshops that address pressing global challenges.
- » Skill Development Participate in interactive sessions and workshops designed to enhance your skills and knowledge in sustainable practices and innovative approaches in healthcare.
- » Multidisciplinary Collaboration Explore diverse perspectives and interdisciplinary approaches that contribute to sustainable development goals (SDGs). Collaborate with professionals from various fields to generate holistic solutions.
- » Showcase Your Research Present your research findings to a global audience. This is an excellent opportunity to receive feedback, engage in constructive discussions, and enhance your visibility within the scientific community.
- » Stay Ahead of Trends Stay updated on the latest trends, technologies, and methodologies shaping the future of life sciences and healthcare. Understanding these trends will better equip you to address the challenges of tomorrow.

About IFERP Life Sciences

IFERP Life Sciences—Formerly Bioleagues—is a globally recognized professional association meant for research, innovation and development in the field of life sciences and medical sciences. It serves to propel and fuel all innovative works of research with immense potential in the fields of Healthcare, Life Sciences, Pharmaceutical Sciences, Medical Sciences, Food & Nutrition, Environmental Science, Oncology, Cardiology, Nursing, Microbiology, Physiotherapy, Dentistry and many more. IFERP Life Science has been directly responsible for a significant amount of the revolutionary developments that have taken place in these fields over the past few decades.

IFERP Life Science is a specialized platform that supports life science and medical professionals in advancing their careers and research impact. Our tailored solutions include international conferences, Faculty Development Programs, Webinars, author services, membership and scientific communications, designed to foster collaboration and knowledge-sharing within the global medical community.

Our Mission

- » Promote global research, innovation and development in life science, medical science, environmental science, pharmaceutical science and health care, to attain sustainable development goals (SDG's) for universal benefit.
- » Advance Life Science & Medical Science for societal service.
- » To facilitate knowledge exchange and growth through our professional activities and scientific conferences.

Our Vision

- » An inclusive global scientific community promotes excellence in life science and medical events, author services, membership, informed decisions, and actions worldwide.

From Director, IFERP

**Siddth Kumar
Chhajer**



Managing Director, IFERP,
Technoarete Group, India



On behalf of IFERP & the organizing Committee, I express my hearty gratitude to the Participants, Keynote Speakers, Delegates, Reviewers and Researchers.

The goal of the International Conference on Multidisciplinary Approaches in Healthcare, Clinical Practice and Public Health (ICMAHCPH-2026) is to provide knowledge enrichment and innovative technical exchange between international researchers or scholars and practitioners from the academia and industries in the field of Healthcare, Clinical Practice and Public Health.

This conference creates solutions in different ways and to share innovative ideas in the field of Healthcare, Clinical Practice and Public Health. ICMAHCPH-2026 provides a world class stage to the Researchers, Professionals, Scientists, Academicians and Students to engage in very challenging conversations, assess the current body of research and determine knowledge and capability gaps.

International Conference on Multidisciplinary Approaches in Healthcare, Clinical Practice and Public Health (ICMAHCPH-2026) will explore the new horizons of innovations from distinguished Researchers, Scientists and Eminent Authors in academia and industry working for the advancements in Healthcare, Clinical Practice and Public Health from all over the world. ICMAHCPH-2026 hopes to set the perfect platform for participants to establish careers as successful and globally renowned specialists in the field of Healthcare, Clinical Practice and Public Health.

From CEO, IFERP

Rudra Bhanu Satpathy



CEO, IFERP,
Technoarete Group, India



IFERP is hosting the International Conference on Multidisciplinary Approaches in Healthcare, Clinical Practice and Public Health (ICMAHCPH-2026) this year in month of April, 2026.

The main objective of ICMAHCPH-2026 is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts.

Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader.

I express my hearty gratitude to all my colleagues, staffs, professors, reviewers and members of organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to make this conference successful.

About Keynote Speaker

Dr. Tan Ching Siang



Dean, School of Pharmacy,
KPJ Healthcare University,
Malaysia



Prof. Dr. Tan Ching Siang is a distinguished academic and clinical pharmacy expert with over two decades of experience in pharmaceutical education, research, and healthcare practice. He earned his PhD and Master's degrees in Clinical Pharmacy and Pharmaceutical Policy from Universiti Sains Malaysia, and a Bachelor of Pharmacy (Hons) from the University of Malaya.

Currently serving as a Professor at KPJ Healthcare University, he also holds multiple key roles, including Research and Innovation Committee Member, MyRA Lead Auditor, and Council Member of the Malaysian Academy of Pharmacy (MAP).

His research focuses on pharmacoeconomics, hypertension management, medication adherence, and health outcomes, and he has published more than 80 peer-reviewed papers in international journals indexed by Scopus, ISI, and Elsevier.

Prof. Tan is an Editorial Board Member for several international journals and a Reviewer for prestigious publications such as BMC Health Services Research, PLOS ONE, and Value in Health.

He has been actively involved in various research grants, national accreditation panels, and international conferences as a plenary and invited speaker. His professional memberships include the Malaysian Pharmaceutical Society, the International Society for Pharmacoeconomics and Outcomes Research (ISPOR), and the Malaysian Pharmacy Board, where he also contributes as a Technical Committee Member.

About Keynote Speaker

Ir. Ts. Dr. Pau- Loke Show



Professor,
UCSI University
Malaysia



Professor Ir. Ts. Dr. Pau-Loke Show is currently Director of the Center of Excellence for Research, Value Innovation and Entrepreneurship (CERVIE) at UCSI University, Malaysia. Prior to joining UCSI, he was a Full Professor in the Department of Chemical and Petroleum Engineering at Khalifa University, Abu Dhabi, United Arab Emirates.

Before his appointment at Khalifa University, he served as Professor of Biochemical Engineering in the Department of Chemical and Environmental Engineering, Faculty of Science and Engineering, at the University of Nottingham Malaysia. He was also the founding Co-Director of Future Food Malaysia, Beacon of Excellence, and Director of the Sustainable Food Processing Research Centre. In addition, he served as the Founding President of the International Bioprocessing Society, based in Malaysia.

Prof. Show obtained his PhD in a record time of two years, immediately after completing his bachelor's degree at Universiti Putra Malaysia. He is a Fellow of the Institution of Chemical Engineers (FICHEME) and a Professional Engineer (PEng) registered with the Board of Engineers Malaysia (BEM). He is also a Chartered Engineer (CEng) with the Engineering Council UK, a Corporate Member of The Institution of Engineers, Malaysia (MIEM), and a Professional Technologist (PTech) registered with the Malaysia Board of Technologists (MBOT). Furthermore, he holds a Postgraduate Certificate of Higher Education (PGCHE) and is a Fellow of the Higher Education Academy (FHEA), UK.

Prof. Show has received numerous prestigious academic accolades, including the Mustafa Prize Young Scientist Medal, Young Asian Biotechnologist Prize, Biology and Biochemistry in Malaysia Leader Award, World's Rising Stars of Science, Highly Cited Researcher recognition, Ten Outstanding Young Malaysian Award, Tan Sri Emeritus Professor Augustine SH Ong International Special Award on Innovations and Inventions in Palm Oil, APEC Science Prize for Innovation, Research and Education (ASPIRE) Malaysia Award, Malaysian Young Scientist Award, The DaSilva Award, JSPS Fellowship Award, Top 100 Asian Scientists recognition, Asia's Rising Scientists Award, and the Young Researcher Award by IChemE, among others.

He has successfully supervised more than 45 PhD and MSc students and currently leads a research team of about 30 members, comprising postdoctoral researchers, PhD candidates, and MSc students. Prof.

Show has given about 50 keynotes, invited seminars, conferences, and professional short courses to the engineering fraternity. Prof. Show has authored/ co-authored close to 500 SCI top-tier international journal publications, which have collectively received more than 65,000 citations and an h-index exceeding 130 (Google Scholar). These achievements position him among the top-ranked leaders in his fields of expertise, particularly microalgae technology and food engineering, according to Google Scholar metrics.

He has also served as Principal Investigator for more than 35 international, national, and industry-funded projects, with a combined funding value exceeding 5 million. Prof. Show is actively involved in academic publishing and currently serves as Editor-in-Chief of the Journal of Current Nutrition & Food Science and the Journal of Biochemical Sciences, as well as Co-Editor-in-Chief of the Journal of Agrobiodiversity.

He is an Editor for Scientific Reports and Biocatalysis and Agricultural Biotechnology, an Associate Editor for Environmental Science and Ecotechnology, and an Editorial Board Member for journals such as the Biochemical Engineering Journal, Journal of Ionic Liquids, and Chinese Chemical Letters. Additionally, he has also served as Lead Guest Editor for high-impact journals including Renewable and Sustainable Energy Reviews, Journal of Hazardous Materials, Environmental Pollution, Chemosphere, and Bioengineered, among others. An active and highly sought-after reviewer, Prof. Show serves as a peer reviewer for more than 150 esteemed international journals, including those published by Nature, Science, Elsevier, Wiley, Springer, ACS, RSC, and Taylor & Francis.

He has been recognized as a Top Peer Reviewer by Publons, receiving Top 1% Global Peer Reviewer awards in Engineering, Cross-Field, Chemistry, Biology and Biochemistry, and Agricultural Sciences. He has also acted as a handling editor for more than 3,000 manuscripts across numerous journals. Through his research, leadership, and professional service, Prof. Ir. Ts. Dr. Pau-Loke Show continues to make significant contributions to biochemical engineering, microalgae biotechnology, and sustainable food processing, maintaining his position as a global leader in academic research and innovation.

About Keynote Speaker

Dr. Elifsena Canan Alp



Batman Education and Research
Hospital, Batman-Türkiye



Elifsena Canan Alp Arıcı, originally born in Malatya, completed her medical education at Meram Faculty of Medicine and then completed her compulsory service at Niğde/Bor State Hospital. She specialized in obstetrics and gynecology at Necmettin Erbakan University's Meram Faculty of Medicine. During this time, she also studied some open-label courses. She currently works as a specialist obstetrician and gynecologist at Batman Training and Research Hospital.

About Keynote Speaker

Dr. Zeliha Selamoglu



Faculty of Sciences, Department of Biology,
Khoja Akhmet Yassawi International Kazakh-
Turkish University, Turkestan, Kazakhstan



Zeliha Selamoglu is a Full Professor in Medical Biology department of Nigde Ömer Halisdemir University, Turkey. She earned her PhD in Biology from Inonu University. She has published over 345 peerreviewed journal articles with over 8263 citations and many technical reports. She is a member of Society for Experimental Biology and Medicine: Associate Membership and European association for cancer research. She has served as Editorial Board member for many Journals.

About Keynote Speaker

**Dr. Wan Mohd
Zahiruddin Wan
Mohammad**

Universiti Sains Malaysia (USM),
Malaysia



Zahiruddin WM is currently an Associate Professor in Epidemiology & Biostatistics, the Zahiruddin WM is currently an Associate Professor in Epidemiology & Biostatistics, the Head of Department of Community Medicine as well as the Head of the Public Health Research Cluster of School of Medical Sciences, Universiti Sains Malaysia. Obtained a medical degree in 1994 and a Master's Degree in Community Medicine (Epidemiology & Biostatistics) from USM in 2002.

He worked at the HIV/STI Sector, Disease Control Division, Ministry of Health Malaysia in Putrajaya until 2005. Has produced nearly 90 SCOPUS-indexed publications and involved as principal and co-investigator in various university, national and external research grants while supervising doctoral (DrPH) and master's (MPH) candidates, with a focus on infectious disease epidemiology.

He has attended WHO fellow training in HIV/AIDS surveillance in 2004 and Infectious Disease Modelling in Imperial College London in 2014. His areas of expertise are Public Health and Epidemiology of Communicable Diseases, focusing on HIV/AIDS, Tuberculosis, Leptospirosis and other diseases related to the One-Health approach. Has been an EXCO member of the National Coordinating Committee Mechanism (CCM) of HIV and also Malaysia Epidemiology Association.

About Keynote Speaker

Dr. Ebrahim Alinia-Ahandani <<<

Food and Drug Research Center,
Food and Drug Administration,
Ministry of Health and Medical Education,
Tehran, Iran



Dr. Ebrahim Alinia-Ahandani is a distinguished biochemist and researcher currently serving as a faculty member at the Deputy of Food and Drug, Guilan University of Medical Sciences (Rasht in Iran), and as an official scientist at the Food and Drug Research Center of the Ministry of Health in Tehran. He earned his Ph.D. in Biochemistry in 2021, complementing his M.Sc. in Biology from Urmia University in Iran.

With a prolific research portfolio, Dr. Alinia-Ahandani has authored over 180 scientific publications, including 6 books and 10 international book chapters, focusing on critical areas such as food safety, toxicology, medicinal plants, and the biomedical applications of polymers and nanomaterials.

His investigative work extensively covers the risk assessment of toxic metals in herbs and environmental samples, the effects of phytochemicals on chronic diseases, and innovative uses of nanotechnology in sustainable agriculture and health. An experienced educator, he has taught biochemistry, biology, and academic English for more than 20 years across multiple universities, including Payame Noor University and Sama University of Lahijan.

He is also an active scientific editor and editorial board member for numerous international journals. Recognized for his scholarly impact, he has received awards such as Best Researcher of Guilan (2022) and Best Researcher of the Elite Foundation of Iran (2022). He also was selected researcher and nominator of Elite foundation of Iran in 2021.

Dr. Alinia-Ahandani regularly presents at international conferences, contributes to academic committees, and maintains collaborative projects advancing public health and environmental science.

About Keynote Speaker

Dr. Rosa Maria Orriols



Member Board of Directors,
Women in Global Health,
Spain.



Rosa M. Orriols is a global health leader with over 25 years of experience working within health systems and supporting the health workforce, with a strong focus on sustainability, resilience, and gender equity. She currently serves as Chief Sustainability & Environmental Health Advisor at the Catalan Institute of Health and Vice President of Women in Global Health (WGH) Spain.

She is a Board Member of the International Commission on Occupational Health (ICOH) and a Trustee of FUNDIT-Esdi at Universitat Ramon Llull. Rosa collaborates closely with WHO and EU institutions, advocating for safe and fair working conditions for health workers and promoting diversity in leadership. Notably, she led the design of the first personal protective equipment (PPE) for future pandemics tailored to the needs of health workers, with special consideration for the fact that the majority are women.

Her expertise lies in integrating health, workforce well-being, and sustainability while aligning policies with the Sustainable Development Goals (SDGs) to build healthier, more equitable, and resilient health systems globally.

About Committee Members

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Conference Convenor,
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Harmoni Warga Emas: A Community-Based Integrated Geriatric Screening and Health Empowerment Programme in Rural Malaysia

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Abstract:

Malaysia is rapidly transitioning into an ageing nation, necessitating community-based strategies to address the complex and multifactorial health needs of older adults. The Harmoni Warga Emas programme was a multidisciplinary geriatric community intervention conducted at Madrasah Muhammadiyah, Pondok Sungai Durian, Kuala Krai, Kelantan, in August 2025. This programme aimed to identify unmet health needs, promote self-management, and screen for sarcopenia and risk of falls among older adults (warga emas) using functional performance and muscle strength assessments. A total of 96 older participants underwent comprehensive health screening, including non-communicable disease (NCD) assessment, nutritional status evaluation, functional mobility assessment using the Timed Up and Go test, sarcopenia screening via hand-grip strength, mental health screening, as well as vision and oral health examinations. The findings revealed a high burden of chronic conditions among older adults, with some participants demonstrating elevated blood pressure and abnormal blood glucose levels requiring medical follow-up. A substantial proportion of participants were identified as being at increased risk of falls and exhibited reduced hand-grip strength, indicating probable sarcopenia and heightened vulnerability to functional decline. In addition, eye screening detected abnormal findings in 27 of 81 participants, while dental assessments identified untreated caries and periodontal disease. Influenza vaccination uptake was achieved among selected participants during the programme. Beyond health screening, community health advocates were trained to perform basic blood pressure and glucose monitoring to ensure continuity of care and sustainability. This integrated, interprofessional community-based model demonstrates the feasibility and impact of geriatric screening programmes in improving early detection, functional safety, and health literacy among older adults.

Describing Tuberculosis Knowledge in a High-Risk Group: Patients with Diabetes Mellitus

Nor Sabrina Kassim

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Nur Suhaila Idris*

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Siti Suhaila Mohd Yusoff

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Abstract:

Tuberculosis (TB) remains a major public health concern, particularly among patients with diabetes mellitus (DM), who are at increased risk of infection and poorer outcomes. Adequate knowledge of TB is essential to promote early recognition, timely care-seeking, and prevention in this high-risk group. This study aimed to describe the level of TB knowledge among diabetic patients attending outpatient clinics in a tertiary hospital in Malaysia. A cross-sectional study was conducted among 229 adult patients with diabetes mellitus attending outpatient clinics at Hospital Pakar Universiti Sains Malaysia. Participants were recruited using systematic random sampling. TB knowledge was assessed using a validated Malay-language TB Knowledge questionnaire. Sociodemographic characteristics were collected, and descriptive analyses were performed. The mean TB knowledge score was 20.6 ± 4.5 (out of 27), indicating a moderate-to-high level of knowledge. Most participants correctly identified key TB symptoms, modes of transmission, and preventive measures. However, knowledge gaps were observed regarding modifiable risk factors; only 23.0% recognised smoking and 40.2% recognised diabetes mellitus as TB risk factors. The majority of respondents were older adults (mean age 62.9 years), female, Malay, and from lower-income households. While overall TB knowledge among diabetic patients was satisfactory, important gaps persist, particularly regarding behavioural and comorbidity-related risks. Targeted education integrated into diabetes care is needed to address these gaps and strengthen TB prevention efforts.

Prevention of Suicidal Behavior in Children and Adolescents in Primary Health Care: Subjective Perception of the Educational Environment as a Key Target for Intervention

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Pavlodar Regional Mental Health Center, Pavlodar, Kazakhstan

Kassenova Gulzhan

Faculty of Medicine and Healthcare, Al-Farabi Kazakh National University, Almaty, Kazakhstan

Abstract:

Relevance: Suicidal behavior, especially its recurrent forms, is a significant medical and social problem.

Objective: To examine the association between the level of satisfaction with schooling and suicidal behavior in children and adolescents.

Materials and Methods: A retrospective analysis was conducted of 424 cases of suicidal behavior among underage Kazakhstanis (362 with a first episode and 62 with a recurrent course). To assess the association between the level of satisfaction with schooling and suicidal behavior, Pearson's χ^2 test and binary logistic regression were used, adjusting for baseline characteristics (sex and age).

Results: Univariate analysis revealed statistically significant differences between the groups in the level of satisfaction with schooling ($\chi^2=7.805$, $p=0.020$) and sex ($\chi^2=5.113$, $p=0.024$). In the multivariable model, satisfaction with schooling retained an independent association with suicidal behavior ($p=0.035$); a one-point increase in satisfaction was accompanied by a 29% decrease in the odds of recurrence (OR=0.709, 95% CI=0.515–0.976). Sex, which was significant in the univariate analysis, lost its predictive significance in the multivariable model ($p=0.185$), and age did not demonstrate a significant effect at any stage ($p>0.05$).

Conclusions: A high level of satisfaction with schooling, reflecting the subjective perception of the educational environment, is an independent protective factor against suicidal behavior in minors. The findings support the need to monitor perceptions of the educational environment as a target for preventive interventions in primary health care.

Index Terms:

Children, Adolescents, Satisfaction with Schooling, Educational Environment (Learning Environment), Prevention of Suicidal Behavior, Kazakhstan

Healing Effects of Novel Matrix Rhythm Therapy in Non-Alcoholic Hepatomegaly with Dilated Portal Vein and Mild Splenomegaly: A Case Study

Rajeswari R

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Sreelekha

Physiotherapist, Cell Healing, Bangalore, India

Abstract:

Background: Non-alcoholic hepatomegaly is an increasingly common condition associated with metabolic dysfunction and lifestyle-related risk factors. If not identified and managed early, it may progress to portal hypertension, splenomegaly, and advanced liver disease. Conservative, non-invasive interventions that support physiological recovery are therefore of growing relevance in public and physical health practice.

Objective: To describe the clinical outcomes of a novel rehabilitation approach using Matrix Rhythm Therapy (MaRhyThe©), in combination with dietary modification, in a case of non-alcoholic hepatomegaly with dilated portal vein and mild splenomegaly.

Methods: A 43-year-old non-alcoholic male presented with right hypochondrial pain, abnormal liver function tests, metabolic abnormalities, and imaging-confirmed hepatomegaly with mild fatty infiltration, dilated portal vein, and mild splenomegaly. The intervention consisted of MRT administered once weekly for 12 sessions using physiological frequencies of 8–12 Hz, applied to spinal, anterior trunk, and lymphatic regions. A structured low-carbohydrate, high-fiber diet was followed concurrently. Outcomes were evaluated using serial ultrasonography, elastography, biochemical parameters, pain assessment, and body weight measurements.

Results: Post-treatment assessments conducted after the intervention showed that the size of the liver, the diameter and flow of the portal vein, and the size of the spleen had returned to normal, and there was no sign of hepatic fibrosis on elastography. Improvements were noted in lipid profiles, inflammatory markers, glycemic indices, and liver enzymes. The patient is completely satisfied with the reduction in pain and his significant weight loss.

Conclusion: This case suggests that Matrix Rhythm Therapy, when integrated with dietary intervention, may serve as a feasible conservative rehabilitation strategy in the early management of non-alcoholic hepatomegaly and related portal circulatory changes. Further studies with larger sample sizes are required to confirm these findings and establish broader clinical applicability.

Index Terms:

Children, Adolescents, Satisfaction with Schooling, Educational Environment (Learning Environment), Prevention of Suicidal Behavior, Kazakhstan

Blood–Brain Barrier Disruption in Systemic Diseases: Clinical Consequences for Neurological Function

Aditya Chauhan

Dayananda Sagar University- Department of Radiodiagnosis, Bengaluru, India

Abstract:

The blood–brain barrier (BBB) plays a crucial role in maintaining central nervous system homeostasis by regulating the exchange of molecules between systemic circulation and neural tissue. Emerging clinical evidence suggests that systemic diseases such as diabetes mellitus, hypertension, systemic inflammation, and autoimmune disorders can significantly compromise BBB integrity. Disruption of this protective barrier allows peripheral inflammatory mediators, immune cells, and circulating toxins to access neural tissues, potentially contributing to neuroinflammation, neuronal dysfunction, and progressive cognitive decline.

Recent clinical studies highlight that BBB permeability alterations are associated with early neurological manifestations, including cognitive impairment, mood disturbances, and increased vulnerability to neurodegenerative processes. Furthermore, vascular and metabolic dysregulation in systemic diseases may exacerbate endothelial dysfunction, impair tight junction stability, and promote inflammatory cascades within the neurovascular unit.

Understanding the mechanisms underlying BBB disruption in systemic diseases is essential for improving early detection of neurological complications and developing targeted therapeutic strategies. This multidisciplinary perspective integrates clinical neurology, vascular biology, and public health approaches to better understand how systemic health influences brain integrity and neurological outcomes.

Index Terms:

Children, Adolescents, Satisfaction with Schooling, Educational Environment (Learning Environment), Prevention of Suicidal Behavior, Kazakhstan

Emorhythm – AI Adaptive Music System Using DL For Expressive Facial Gesture Synthesis

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Abstract:

One of the current areas of the affective computing field is emotion-aware multimedia personalization, which allows interaction flexibility between human emotional behavior and digital content. This study is a multimodal intelligent system that combines real-time facial emotion recognition, real-time music suggestion and music creation. Its structure applies deep learning on facial emotion classification based on EfficientNet as well as temporal smoothing to generate stable emotion curve patterns. The mixed-up feelings are identified and matched to the music genres selection through Spotify metadata and generated background music through Google Gemini. The results of experimental evaluation are strong emotion recognition, temporal consistency, and contextual consistent music adaptation and are in favor of the fluent user experiences. The system demonstrates possibilities in using it in personalized music platforms, scoring video contents, and affective multimedia interfaces. Individualization and responsiveness of real-world multimedia settings are improved through the hybrid configuration of retrieval-based and generative audio techniques.

Index Terms:

Emotion Recognition, Multimedia Personalization, Temporal Analysis, Music Recommendation, Generative Music, Affective Computing, User Experience

Group Concept Mapping (GCM) Study on Developing the Concept of Family Resilience in South India

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Abstract:

This paper presents findings from a Group Concept Mapping (GCM) study exploring how community health workers (CHWs) in South India understand family resilience. The study was conducted through a collaboration between the University of South Wales (USW) FRAIT research team and the College of Nursing at Christian Medical College (CMC), Vellore. The aim was to identify the key components of family resilience from the perspective of CHWs and use these insights to inform the development of a culturally relevant Family Resilience Assessment Instrument and Tool for India (FRAIT India), intended for use with families who have children under six years of age.

A face to face GCM process was used to generate, sort, and rate statements related to family resilience. CHWs produced 125 statements, which were analysed using multidimensional scaling and hierarchical cluster analysis. The final concept map consisted of seven clusters representing the CHWs' shared understanding of family resilience: Child Rearing, Cultural Aspects and Beliefs, Equality, Family Life, Family Challenges, Health and Management Schemes, and Resources.

Clusters related to Health and Management Schemes and Child Rearing contained the highest number of statements rated as essential or important, suggesting that CHWs view these areas as the most influential in supporting families. These domains are likely to form the core of the FRAIT India tool.

Overall, the seven cluster map demonstrates that family resilience in South India is shaped by cultural, social, structural, and behavioural factors. These findings will guide the development of FRAIT India and support targeted interventions, training, and policy development.

The Therapeutic Potentials of Propolis on Liver Injury: *In Silico* Analyses

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Abstract:

With rapid advances in pharmacological research, active ingredients which served as prototype molecules for possible development of novel drugs such as; honey bee natural products. The ancient rock art of early hunter-gatherers depicts the honeybee as a source of natural medicine. Therapies involving the honeybee have existed for thousands of years and some may be as old as human medicine itself. Apitherapy (is the medicinal use of products made by honeybees) is used to treat many illnesses and to alleviate pain from injuries both chronic and acute. Today, growing scientific evidence suggests that various bee products such as propolis promote healing by improving circulation, decreasing inflammation, and stimulating a healthy immune response. Propolis is a natural glue material collected from plants by honeybees that is used to seal cracks in beehives and to protect the bee population from infections. Propolis has a long history of medicinal use as a natural remedy. Propolis contains many antioxidative components, such as caffeic acid, ferulic acid and caffeic acid phenethyl ester. The pharmacological potential of propolis has been further expanded; it has been shown to have anti-inflammatory, immunomodulatory, anti-cancer, antioxidant and metabolic regulatory effects. Within the scope of this study, an in-silico study was performed as a preliminary investigation to establish a scientific basis for future research on beekeeping in Kazakhstan. Kazakhstan has significant beekeeping potential thanks to its vast natural steppe areas, foothills, and diverse climatic zones, which contribute to its rich flora. The aim of the study was to evaluate the bioavailability of the important bioactive compounds identified usually in many propolis samples in-silico analyses. Computational analysis revealed a substantial overlap between these compounds' targets and some important proteins and enzymes. This research is intended as a hypothesis-generating preliminary investigation. Propolis is one of the most promising natural products, exhibiting not only therapeutic but also prophylactic actions. The multi-targeted effect profile observed in this study reinforces the value of propolis as a scientifically interesting natural product for apitherapy and functional food applications.

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Index Terms:

Therapeutic compounds, *In-Silico* Analysis, Kazakhstan, Propolis

Educational Psychology Paradigms: Adoptive Social and Emotional Learning

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Abstract:

The combination of adoptive social and emotional learning (ASEL) in educational psychology concepts has emerged as a novel procedure in the current educational systems. This study focuses on three major models in educational psychology: behaviourism, brain developmentalism, and social cognitivism. This research work is centered on three key models in educational psychology, which are behaviourism, brain developmentalism, and social cognitivism. The main aim is to develop a suitable pattern for the current education system that explains how behaviourism, brain developmentalism, and social cognitivism models can be used to influence learning and educational practices. A clear understanding framework has been designed of their influence can be defined by comparing their basic assumptions, learning methods, and educational uses. This enables teachers to choose or combine methods depending on the learners' needs and situations. Through extensive research studies, daily practice, and authentic case studies, the value-based integration of these models results in the standard growth of student outcomes, emotional well-being, and academic achievement.

Index Terms:

Behaviourism, Brain Developmentalism, Social Cognitivism, Integrated Paradigm

1. Introduction: The Convergence of Educational Psychology and Social-Emotional Development

Traditionally educational psychology has focused on understanding how individuals acquire knowledge and develop skills. However, the landscape of education has fundamentally shifted over the past two decades, recognizing that learners are not merely processors of information but whole human beings with emotional, social, and developmental needs[2][3]. The convergence of three major educational psychology paradigms such as behaviourism, brain developmentalism, and social cognitivism—provides a robust theoretical foundation for fostering social and emotional learning.

The preferable approach to education emphasises that learning transcends academic content acquisition. It's about helping students understand themselves, manage their relationships, make good choices, and social awareness—the five core competencies of adoptive social and emotional learning[4]. When educators combine their skills with psychological paradigms grounded in empirical

research, the outcomes are profound and sustained.

2. The Three Educational Psychology Paradigms

2.1 Behaviourism: Structure and Positive Reinforcement

Behaviourism, rooted in the work of B.F. Skinner and Albert Bandura's early social learning theory posits that learning is a change in observable behaviour shaped by external environmental stimuli and reinforcement patterns. In real-time educational environments, behaviourism manifests through structured classroom management systems, positive reinforcement mechanisms, and clearly defined behavioural expectations.

Real-World Implementation: Token Economy Systems

Many institutions across India and globally employ token economy systems based on behaviourist principles. For instance, a secondary school in Bangalore implemented a "Positive Behaviour Recognition Program" where students earned digital tokens for demonstrating respect, responsibility, and empathy. These tokens were redeemable for privileges like flexible seating, tech time,

or recognition certificates. The quantitative data showed a 34% reduction in disciplinary incidents within six months and improved attendance rates from 87% to 94%.

Values Representation:

- Accountability: Clear consequences and rewards promote responsibility
- Consistency: Reinforcement patterns establish predictable, safe learning environments
- Recognition: Acknowledging positive behaviour reinforces intrinsic motivation development

2.2 Brain Developmentalism: Readiness and Scaffolding

Brain developmentalism emphasizes that cognitive and emotional growth occur in stages aligned with neurobiological maturation. This paradigm, informed by neuroscience research and developmental theorists like Jean Piaget and Erik Erikson, recognizes that children's

brains develop at different rates and require age-appropriate, scaffolded learning experiences[3].

2.2.1 Real-World Implementation: Stage-Appropriate Social-Emotional Curriculum

A collaborative study was made across 8 schools in Coimbatore (2024–2025) implemented developmentally-aligned SEL curriculum:

- Primary (Classes I-III): General games were designed, and play-based activities were performed to obtain the children's responsiveness and their skills based on emotions.
- Middle School (Classes IV-VI): Identify the students' perception level and their conflicts to develop the peer relationship in the environment.
- Secondary (Classes IX-X): Create awareness about the decision making in an ethical way, stress management, and social encouragement.

Table 1. Implementation of SEL curriculum in schools

Student cadre	No. of Students participated	SEL prime factors	Before curriculum (Avg % of the students)*	After curriculum (Average % of students)	Improvement percentage
Primary (I-III)	200	Responsiveness & Play-based Skills	65%	89%	+24%
Middle (IV-VI)	300	Perception level & Conflict Resolution	58%	83%	+25%
Secondary (IX-X)	400	Ethical Decision Making & Stress Management	45%	84%	+29%
Total/Average	1000	Comprehensive SEL Alignment	56%	85.3%	+26%

Results demonstrated that after the awareness created among the students about the social-emotional curriculum learning environment, SEL showed an average of 26% improvement in self-regulation, improvement in peer relationships, ethical balance in making decisions and social encouragement.

2.3 Social Cognitivism: Modelling, Self-Efficacy, and Community

Social cognitivism, advanced by Albert Bandura, posits that learning occurs through reciprocal interaction between personal, behavioural, and environmental factors. This paradigm emphasises observational learning, vicarious reinforcement, and the critical role of self-efficacy beliefs.

2.3.1 Real-World Implementation: Peer Mentoring and Collaborative Learning

A prominent engineering college in Mysuru implemented a comprehensive peer-mentoring program grounded in social cognitive theory. Trained the faculties, mentored first-year students, modelling effective study habits, emotional resilience, and help-seeking behaviours. The program tracked outcomes over the four academic years, revealing that mentored students demonstrated:

- 29% higher academic performance (GPA improvement)
- 11% lower dropout rates
- 65% increased sense of belonging and community connectedness

3. Integration Framework: Synergising the Three Paradigms

The most effective educational environments integrate all three paradigms rather than privileging one above the others. The humanized integration framework operates as follows:

Behavioural Foundation → Developmental Adaptation → Social Cognitive Enhancement

This sequential integration ensures that:

1. Clear behavioural structures create psychological safety (Behaviourism)
2. These structures adapt to individual developmental readiness (Brain Developmentalism)
3. Peer modelling and collaborative processes internalize skills (Social Cognitivism)

3.1 CASEL Framework Overview

The Collaborative for Academic, Social, and Emotional Learning (CASEL) framework, often visualized as a wheel, emphasizes systemic implementation across classrooms, institutions, families, and communities. Its five core competencies form the foundation:

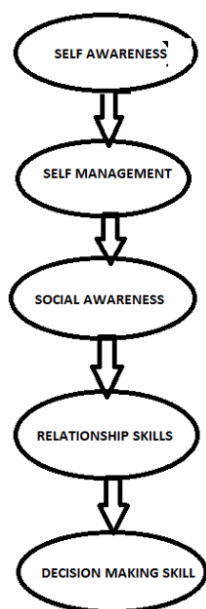


Fig 1. CASEL Framework

- **Self-Awareness:** Recognizing one's emotions, thoughts, and values, while understanding how they influence behaviour. Includes skills like self-confidence and accurate self-perception.
- **Self-Management:** Regulating emotions, thoughts, and behaviours effectively in different situations. Key elements include impulse control, stress management, goal-setting, and self-discipline.
- **Social Awareness:** Showing empathy and understanding perspectives of others from diverse backgrounds. Encompasses appreciating diversity and respecting others.
- **Relationship Skills:** Establishing and maintaining healthy relationships through communication, cooperation, conflict resolution, and seeking help when needed.
- **Responsible Decision-Making:** Making caring and constructive ethical choices considering safety, social norms, and consequences for self and others.

4. Empirical Outcomes and Comparative Analysis

4.1 SEL Implementation Outcomes: National and International Data

Research conducted by the Collaborative for Academic, Social, and Emotional Learning (CASEL) involving around 10,000 students provides compelling evidence:

- **Academic Achievement:** Students in comprehensive SEL programs expressed an 13% gain in academic performance.
- **Long-term Impact:** Performance advantage was 27percentile points higher in the years after program completion
- **Educator Perspective:** 80% of educators reported that integrated SEL positively impacts student academic performance and emotional well-being.
- **Implementation Growth:** In 2024, over 80% of Indian institutions stated implementing SEL programs; similar implementation rates are emerging in India.

4.2 Comparative Analysis: Single vs. Integrated Paradigm Approaches

The following table presents comparative data from a mixed-methods study examining institutions using single paradigm approaches versus integrated approaches:

Table 2: Comparative Effectiveness: Single vs. Integrated Paradigm Approaches

Outcome Measure	Behaviorism-Only	Developmentalism-Only	Integrated Approach
Academic Achievement (Percentile)	7	9	17
Student Engagement (0–10 Scale)	6	7.5	9
Social Skills Development	33%	42%	58%
Emotional Regulation Improvement	27%	36%	65%
Attendance Rate Improvement	7%	11%	15%
Teacher Job Satisfaction (out of 10)	5	7	9
Reported Anxiety/Stress (Reduction)	22%	35%	47%

This data demonstrates that integrated approaches consistently outperform single-paradigm implementations across all measured dimensions.

4.3 Student Psychological and Social Outcomes

Extensive research demonstrates that students participating in well-implemented ASEL programs experience:

- Reduced Mental Health Symptoms: 47% reduction in self-reported anxiety, 65% reduction in depression, measurable decrease in suicidal ideation.
- Enhanced Self-Efficacy: 32% improvement in belief that personal effort influences success and outcomes
- Improved Relationships: 38% improvement in peer relationships and teacher-student rapport
- Greater Resilience: 41% increase in perseverance when facing academic challenges
- Increased Belonging: Students report feeling significantly more included and valued in school communities.

5. Real-Time Methodologies in Practice: Case Studies

5.1 Case Study 1: Urban Secondary School – Integrated Paradigm Implementation

School Profile: Co-educational government and private secondary school with 1,200+ students, socioeconomically diverse population

Implementation Strategy:

- Integrated ASEL curriculum across all subjects (2024 – 2025 academic year)

Bringing an Adoptive Social and Emotional Learning (ASEL) curriculum into all subjects does more than just add separate lessons. It weaves essential skills—like self-awareness, self-management, social awareness, relationship skills, and responsible decision-making—right into the fabric of academic teaching.

This comprehensive approach acknowledges that managing emotions and social abilities are key to how we think and succeed in school.

Examples of Subject-Specific Integration

Math: Here, students can work on their self-management by reflecting on their feelings when tackling tough math problems. Collaborative problem-solving tasks help them develop relationship skills, as they respectfully critique each other's thinking through

- Teacher training program grounded in behavioural classroom management, combined with developmental understanding
- Peer mentoring system leveraging social cognitive principles

Results After 12 Months:

The graph below represents the exact values obtained after the SEL curriculum has been implemented in the various schools and the improvements achieved in the major factors.

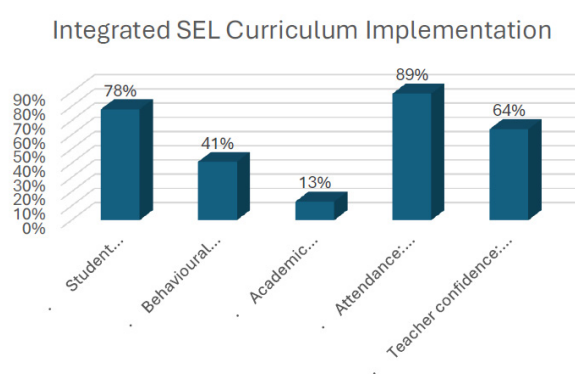


Fig 2. Graphical representation on Subject specific integration

- Academic performance: 13% increase in pass rates
- Behavioural incidents: 41% reduction in suspension-worthy incidents
- Student satisfaction: 78% reported an improved sense of belonging
- Teacher confidence in managing emotional student needs: 64% improvement
- Attendance: Improved from 81% to 89%

5.2 Case Study 2: Private Engineering College – Cross Pattern Model

5.2.1 Integrated “Emotional Intelligence and Professional Development” course

The Integrated Emotional Intelligence (EI) and Professional Development course is a comprehensive training program meant to address the gap between technical proficiency and interpersonal effectiveness. The incorporation of the five core pillars of emotional intelligence—self-awareness, self-regulation, motivation, empathy, and social skills within a professional growth model will enable the development of resilient, adaptable, and human-centred leaders.

The curriculum typically progresses from internal mastery to external influence:

- Intrapersonal Development: Participants reflect on thoughtful practices like affective journaling and mindfulness to identify emotional triggers and improve self-regulation.
- Interpersonal Dynamics: Modules focus on active listening, perspective-taking, and empathy to enhance team collaboration and client relations.
- Applied Professional Skills: The integration of EI into high-stakes scenarios, such as conflict resolution, ethical decision-making, and change management, ensures theoretical knowledge translates into workplace success.

5.2.2 Behavioural expectations with explicit reinforcement for collaborative work

Setting clear behaviour expectations and reinforcing them is really important for teams that want to work well together. Instead of pointing out what not to do, teams should focus on positive, specific goals—like “actively listening in meetings” or “hitting all project deadlines.”

To keep these behaviours going, reinforcement should be:

- Quick and Direct: Giving praise or rewards right after the desired action helps create a strong connection in the mind.

- Diverse: Use a mix of intrinsic rewards, like verbal praise or recognition, and extrinsic ones, such as team bonuses or an extra day off.
- Public: Celebrating what the team has achieved together in front of others helps underline teamwork as a key value of the culture.

Using this kind of structured approach can boost team collaboration by as much as 14%, cutting down on conflicts and building a more resilient and engaged work culture.

5.2.3 Developmentally-aligned support (mentoring, counselling aligned with semester progression)

Support that’s in tune with student development means offering mentoring and counselling that truly fits the unique emotional and academic needs of students throughout their semester. This proactive strategy makes sure that the help provided aligns with the changing pressures of school life, which can lead to better retention and resilience. Here are some real-life examples of support aligned with the semester:

Early Semester (Orientation & Goal Setting): At St. Aloysius College, first-year students get personalized instruction right off the bat to help close any academic gaps as they start their college journey.

Mid-Semester (Stress Management): A lot of schools do mandatory check-ins around midterms to offer both remedial teaching and emotional support, especially when the stress from assessments is at its highest.

Final Semester (Transition & Career): At Royal CET, seniors focus on career mentoring, including doing mock interviews and getting advice on further studies, prepping them for life after graduation. **Targeted Support:** Brandeis University has a digital “Rise Together” network, enabling students to connect with alumni for instant resume feedback and networking opportunities as they get closer to graduation.

5.2.4 Social cognitive components through industry mentors modelling professional behaviours

Introducing the social cognitive theory in the training of professional students allows the students to observe the complex behaviours of the industry mentors. This concept of observational learning is based on mentor modelling a great level of professionalism that can be emulated by the mentees through a process of paying attention, remembering and practising.

Cognitive Apprenticeship: IBM has mentors who discuss their thinking process during coding and allow their staff

to observe the mental techniques of dealing with technical problems.

Vicarious Reinforcement: when a mentor is publicly known to work well with people, it will strengthen the confidence of the mentee who will then imitate them to do the same thing in the line of professionalism.

Results After 18 Months:

The graph below represents the exact values obtained after the SEL curriculum has been implemented in the reputed private engineering college and the improvements achieved in the major factors.

Industry Mentors Modeling SEL via Social Cognitive Theory



Fig 3. SEL approach links

- Placement rate improvement: 8% increase (from 91% to 99%)
- Student mental health: 41% reduction in reported stress and anxiety
- Academic performance: 13% GPA improvement
- Professional skill development: 64% improvement in soft skills assessment
- Industry feedback: 78% of recruiters noted improved interpersonal skills

6. Values-Based Educational Outcomes

Beyond quantitative metrics, the integration of paradigms with ASEL fosters profound values development:

6.1 Core Values Cultivated Through Integrated Paradigms

Incorporating integrated models into educational psychology, especially via adoptive social and emotional learning (ASEL) structures like CASEL, fosters fundamental values such as empathy, accountability and perseverance. The implementation of ASEL embeds virtues such as kindness, acceptance, emotional strength and social obligation into caring educational contexts. This corresponds to comprehensive growth and promotes moral actions and the health of the community.

6.1.1 Accountability and Trustworthiness

The accountability systems based on behaviourist methods and developmental knowledge form the real accountability and not the fear-driven compliance. The values are internalised in the students because they know the reasons why behaviours are important in their development and how it reflected in society.

6.1.2 Compassion and Social Understanding.

Developmentally-appropriate discussions and the perspective-taking aspect of social cognitive theory result in true empathy. With the help of behaviour structures, reinforcing prosocial behaviour, students transition from external compliance to an internal caring behaviour.

6.1.3 Renewal and Strength of Heart. 78%

The knowledge of brain development enables the students to understand that neural development involves effort and struggle. Effort is glorified by behavioural reinforcement; social cognitive modelling features peers being victorious in their struggles.

6.1.4 Equity and Inclusion

With the awareness that all people should be respected and given a chance irrespective of differences, students can cultivate awareness when teachers perceive developmental diversity, apply fair systems of behaviour, and enable peer inclusion.

6.1.5 Agency and Self-Determination.

The confluence of definite behavioural goals (giving structure), developmentally-relevant difficulties (making them attainable), and modelling (showing success) gives students the strength to feel that they can create their own futures.

7. Challenges and Implementation Considerations

While the evidence supporting integrated paradigm approaches is robust, several challenges warrant attention:

- Teacher Preparedness: Not all educators receive training in all three paradigms; professional development must be comprehensive and ongoing.
- Resource Constraints: Implementing integrated ASEL requires investment in curriculum materials, training, and reduced class sizes in some contexts.
- Cultural Responsiveness: Generic programs must be adapted to honour cultural values and community contexts
- Equity Gaps: Implementation fidelity varies across

institutions; disadvantaged communities often have fewer resources for comprehensive SEL.

- **Assessment Challenges:** While social-emotional competencies are developed, standardized assessments remain focused primarily on academic measures.

8. Conclusion and Future discussion

The combination of behaviourism, developmental brain, and social cognitivism with social-emotional learning forms learning opportunities that recognize the entire humanity of learners. The data is clear: once the institutions go beyond the siloed methods and adopt the integrated paradigms, students can achieve academic, emotional, and social success. Real-life applications which have been reported in institutions in India and other parts of the world, show that this is not a mere possibility on paper, but is a reality that is practised. Students can be measured to have enhanced academic performance, emotional stability, and social functionality. The teachers also show increased job satisfaction and effectiveness.

The communities have more active, sensitive, and stronger citizens. We are going to continue on the 2025–2026 academic year and further on, and the question is not whether we should combine these paradigms with adoptive social-emotional learning, but the way to do so so that it will be just, culturally responsive, and systemic. The returns on the investment of humanized and values-based education are much greater than the academic scores—the human beings produced would be able to understand themselves, their relationship with others, make decisions responsibly, and contribute positively to society. Educational leaders, policymakers, and educators need to focus on the full adoption of integrated paradigm methods, where all students, irrespective of socioeconomic status, developmental level, and background experiences, should be provided with learning environments where intellectual excellence is nurtured, as well as emotional prosperity.

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