



Care, collaborate, lead

Research on Mental Health Equity and Digital Health in the Asia Pacific

REMAP-D

Conference 2021

Inaugural Conference of UBC's REMAP-D Research Cluster

26 October 2021, 2:00 – 6:00 p.m. PT, Zoom

It is our great pleasure to welcome you to the Research for Mental Health Equity in the Asia Pacific-Digital (REMAP-D) inaugural conference, **“Care, Collaborate, Lead: Digital and Mental Health Equity in the Asia Pacific”**.

REMAP-D is an emerging Research Excellence Cluster funded by the University of British Columbia’s Grants for Catalyzing Research Clusters initiative. We are an interdisciplinary network of members from UBC, across Canada and the Asia Pacific region who are committed to issues of justice, equity, diversity and inclusion in the broad fields of global mental health, health equity and digital health.

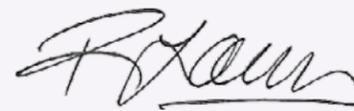
The COVID-19 pandemic has led to unprecedented changes in the way we live, work, interact and engage in our communities- as illustrated by the online format of this conference. Though the pandemic has had an impact on all of us, we recognize that some communities and populations may be at higher risk of experiencing negative mental health and psychosocial impacts as a result of the social and economic strains of the pandemic, which have in many ways compounded pre-existing social and structural inequities and injustices. At the same time, we have seen a shift towards the use of digital technology in mental health care during the pandemic. While this represents a promising shift towards the uptake of evidence-based practice, there is also a risk that the people who most need support may face inequitable access to care delivered online. We recognize both a substantial challenge and clear opportunity to undertake collaborative, interdisciplinary and innovative research to understand these challenges and to identify strategies and solutions to improve mental health equity, including via improved access to digital mental health, across the Asia Pacific.

REMAP-D is fundamentally about inclusive collaboration, recognizing that complex challenges require interdisciplinary approaches and multiple perspectives. Our network of members includes researchers from several disciplines from across Canada, the US, Australia, China and across the region.

Our work takes place in partnership with existing networks including the APEC Digital Hub for Mental Health and the Association of Pacific Rim Universities. A core component of our work is to engage an international Patient Advisory Committee to ensure our work is responsive to the priorities and perspectives of diverse people with lived experience. We hope that this conference will lead to more opportunities for meaningful collaboration.

We are very excited for a dynamic conference that includes an impressive list of speakers and high quality poster presentations. We invite you as conference participants to help guide our work to address these complex challenges by engaging actively, asking questions, providing your own perspectives and contributing to a rich discussion that will energize us as a community. Finally, we welcome you to join our network as REMAP-D members and to work with us in this exciting initiative!

- REMAP-D Leads



Dr. Raymond Lam



Dr. Jill Murphy



Dr. Erin Michalak



- 1:45 – 2:05 p.m. **Participants Sign-in**
- 2:05 – 2:20 p.m. **Opening remarks** / Dr. Raymond Lam & Dr. Jill Murphy
- Presentations**
- 2:20 – 3:20 p.m. Session 1: **Innovations in Digital Mental Health** / Moderator: Dr. Raymond Lam
- Dr. Emma Morton
Bipolar Bridges: A digital health innovation targeting quality of life in bipolar disorder
- Dr. Kendall Ho
Influence of Hot Digital trends in mental health
- Dr. Jasmine Noble, Mr. Ali Zamani, Mr. Mohamad Ali Gharaat
Developing and Implementing a Machine Intelligence Mental Health System Navigation Chatbot to Support Healthcare Workers in Two Canadian Provinces
- 3:25 – 4:25 p.m. Session 2: **COVID-19 and Mental Health Equity** / Moderator: Dr. Jill Murphy
- Dr. Joseph Puyat
Depressive symptoms among Filipino young adults: estimating prevalence and identifying health promotion strategies
- Prof. Michael Lee, Ms. Laura Wang
Digital health promotion: Enhancing health and wellbeing for a diverse audience during COVID
- Dr. Skye Barbic
Understanding mental health equity through the perspectives of youth throughout the COVID-19 pandemic: a longitudinal qualitative study
- 4:25 – 4:55 p.m. Health Break and Final Poster Viewing and Voting
- 4:55 – 5:25 p.m. Session 3: **Collaborative Engagement in Global Mental Health** / Moderator: Dr. Erin Michalak
- Dr. Mellissa Withers
Building authentic partnerships in global mental health
- Dr. Videsh Kapoor
Global Health Initiative: Bhutan Youth Mental Health Project
- 5:25 – 5:50 p.m. Discussion (strengths and opportunities) / Dr. Raymond Lam, Dr. Jill Murphy, Dr. Erin Michalak
- 5:50 – 6:00 p.m. Announcement of Poster Award and Closing Remarks / Dr. Jill Murphy (Inaugural Conference Director)



Dr. Emma Morton completed her PhD and training as a psychologist at Swinburne University, Australia where she was awarded the 2018 Iain Wallace Research for the Most Outstanding Doctorate Student. In 2019, Dr. Morton was awarded a University of British Columbia Institute of Mental Health Marshall Fellowship and in 2021, a CIHR Banting Postdoctoral Fellowship. Dr. Morton's research focuses on the measurement and optimization of quality of life for people living with bipolar disorder as well as digital interventions targeting patient-valued outcomes. Currently, Dr. Morton is working with CREST.BD – the Collaborative REsearch Team to study psychosocial issues in Bipolar Disorder, to develop and evaluate a novel app-based self-management intervention for bipolar disorder.



Dr. Kendall Ho is a practicing emergency medicine specialist and lead, Digital Emergency Medicine. The founding Director of the eHealth Strategy Office until 2015, and the immediate past Associate Dean of the Division of Continuing Professional Development and Knowledge Translation (CPD/KT) up until February 2008 when CPD/KT was transitioned to two units: Continuing Professional Development and the eHealth Strategy Office, Dr. Ho is a member of the Royal College of Physicians and Surgeons of Canada's Professional Development Committee and a collaborator with the World Health Organization eHealth Observatory. He is the executive director of the Technology Enabled Knowledge Translation Investigative Centre (TEKTIC) interdisciplinary research team in BC and the Vice President of the International Association of Humanitarian Medicine. Dr. Ho's academic and research interests fall into the domain of technology enabled knowledge translation (TEKT) – the use of information technologies to accelerate the incorporation of latest health evidence into routine practice.



Dr. Jasmine Noble, a Postdoctoral Fellow at the University of Alberta in the Departments of Computing Science and Psychiatry, served in several senior roles for the Institute of Health Economics, including Senior Researcher and Director of Communications. Previous to this, she was Principal Secretary and Policy Advisor to a Federal Finance Minister, and a Special Assistant to the Prime Minister of Canada. Dr. Noble's research interests include the piloting, implementation, and evaluation of novel public health interventions seeking to support and improve mental health and wellbeing. More recently, her research has focused on innovations to improve mental health system access through use of machine intelligence (artificial intelligence and machine learning). Dr. Noble has a Doctor of Philosophy in Psychiatry from the University of Alberta, a Master of Public Policy from the University of Calgary, and a Bachelor of Education from the University of Alberta.



Ali Zamani, M.Sc. student in the Department of Computing Science at the University of Alberta, received his B.Sc. Electrical Engineering-Electronics from Kashan University, Isfahan, Iran in 2017, and his M.Sc. Digital Electronic Systems Engineering from Amirkabir University of Technology, Tehran, Iran, 2020. His research interests are Natural Language Processing and chatbot. He is working on his master's thesis, "Developing and Implementing a Machine Intelligence mental Health System Navigation Chatbot to Support Healthcare Workers in Two Canadian Provinces."



Mohamad Ali Gharaat, Graduate Research Assistant at the University of Alberta in the Department of Computing Science, obtained his bachelor's degree in Software Engineering at the University of Isfahan, Iran, where he proposed a framework, ALBA, for generating Android location-based apps using a model-driven approach, the results of which have been published in the Automated Software Engineering (ASE) Journal. Mr. Gharaat also received the 4th Iranian National Nano Technologies Olympiad Bronze Award at the age of 18. His research interests include model-driven software engineering, building Intelligent User Interfaces, and making human tasks automated using natural language processing and automation technologies. His master's thesis is about extracting and showing emotions in chatbots. Before joining the University of Alberta, he worked as a full-stack software engineer in Digikala – the biggest retail company in the Middle East.



Dr. Joseph Puyat, Assistant Professor at the UBC School of Population and Public Health and Scientist at the Centre for Health Evaluation and Outcome Sciences (CHEOS), obtained his PhD in Population and Public Health at the University of British Columbia. He has an MSc in Health Care and Epidemiology and an MA in Social Psychology. In his previous research, Dr. Puyat used linked health administrative data from the province of British Columbia to study gaps and disparities in depression care, and examine whether the introduction of physician incentives impacted the magnitude of existing care gaps and disparities. In his current work, he is exploring how the prevalence and burden of depression at the population level can be reduced over time by ensuring that treatment approaches are tailored to individuals' characteristics; reducing or eliminating treatment disparities; and, promoting community-based activities that have therapeutic and preventive effects.



Prof. Michael Lee, Professor of Teaching and Associate Head of Educational Affairs with the Department of Occupational Science and Occupational Therapy, explores strategies in support of faculty wellbeing. His research interests center around the wellbeing of people with mental health issues through participating in daily occupations, especially on youth and young adults. Emphasizing justice, equity, diversity, and inclusivity, his recent works focus on teaching practices that foster student wellbeing in the higher education context.



Laura Wang, Lecturer in the Department of Occupational Therapy of School of Rehabilitation at the Kunming Medical University, is a PhD student at the Hong Kong Polytechnic University focusing on psychosocial rehabilitation. Her teaching focuses on mental health in occupational therapy and her research interests, on occupational therapy for university students with mental health concerns. She is a key member of the Occupational Therapy Committee of the Rehabilitation Medical Association of Yunnan Province.



Dr. Skye Barbic, born and raised in Montreal, is Assistant Professor in the Department of Occupational Science and Occupational Therapy at the University of British Columbia where she completed her second postdoctoral fellowship. Dr. Barbic completed her first postdoctoral fellowship at the Centre for Addiction and Mental Health in Toronto where she developed a comprehensive measure of personal recovery for people with serious mental health conditions such as schizophrenia.



Dr. Mellissa Withers, PhD, MHS is Associate Professor at the Keck School of Medicine in the Department of Preventive Medicine. She also is Director of the Global Health Program of the Association of Pacific Rim Universities, a non-profit network of 56 leading universities in the region. She earned a PhD at the Department of Community Health Sciences in UCLA, an MHS in International Health at Johns Hopkins Bloomberg School of Public Health and a BA in international development at UC Berkeley. Dr. Withers is the editor of two books: *Global Perspectives on Sexual and Reproductive Health Across the Lifecourse*, and *Global Health Leadership: Case Studies from the Asia-Pacific*. She also writes a blog on human trafficking on Psychology Today.



Dr. Videsh Kapoor, Clinical Assistant Professor at the UBC Department of Family Practice and family physician practicing in Vancouver, Canada, completed all of her medical training at the University of British Columbia in Vancouver. She is involved in numerous Faculty of Medicine curriculum development and teaching activities, most notably in establishing Global Health education programs for medical undergraduates and postgraduates. Director of the Division of Global Health in the Department of Family Practice and the Global Health Theme Leader in the Medical Undergraduate Program at UBC, Dr. Kapoor chaired the development of national consensus core global health competencies for medical undergraduate curricula with the Association of Faculties of Medicine of Canada and the Canadian Federation of Medical Students. Dr. Kapoor is currently working on the development of core competencies in global health for Family Medicine Curricula as Faculty Advisor for the UBC Medicine Global Health Initiative (co-founded by medical students and faculty) and as supervisor in four related projects located in India, Kenya, Nepal and Uganda.

VMood: Adaptation of an In-Person Depression Intervention to a Smartphone App

Leena Chau*, Centre for Health Services and Policy Research, Faculty of Health Sciences, SFU

Nguyen Vu Cong, Institute of Population, Health and Development, Vietnam

Viet Anh Duong, Institute of Population, Health and Development, Vietnam

Hayami Lou*, Centre for Health Services and Policy Research, Faculty of Health Sciences, SFU

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*students

Introduction: Community-based depression care has historically been limited in Vietnam. Supported- Self Management (SSM) is a low-cost community-based depression intervention grounded in principles of Cognitive Behavioural Therapy. Patients are given an Antidepressant Skills Workbook and receive supportive coaching from social workers. SSM was developed in Canada and shown to be effective in Vietnam in a randomized controlled trial (RCT). In response to the Government of Vietnam's request to adapt SSM to a more scalable mHealth format, our team developed VMood, a Smartphone app. This is timely given the increased urgency for mHealth solutions within the context of the COVID-19 pandemic. The aim of this work is to describe the adaptation process and present findings from the beta testing.

Methods: SSM was adapted to an app format in Vietnam through an iterative process involving 30 student users. Led by team members in Vietnam, a prototype was developed informed by findings from a literature review ensuring best practices and intervention fidelity adapting in-person interventions to mHealth. App functionality reflects the structure and process of the in-person SSM. It includes depression management functions (e.g., problem solving skills) and access to support from a social worker through a chat function. Beta testing of the prototype involving the 30 users has been completed.

Results: Preliminary results from the beta testing demonstrate that VMood was well-received. Users emphasized VMood's ease of download and activation, and rated it high on usability. Minor technical issues were mentioned and have been addressed in the updated version. Full results will be presented at the conference.

Conclusions: The research team will be piloting VMood in an RCT in the provinces that participated in the in-person SSM RCT. Additional feasibility testing in various geographic, cultural and sociodemographic situations in Vietnam (e.g., in industrial zones) will also be conducted to determine its effectiveness.

Effect of a Digital Intervention on Depressive Symptoms in Patients with Comorbid Hypertension or Diabetes in Brazil and Peru

Liliana Hidalgo-Padilla, MSc; Ricardo Araya, MD, PhD; Paulo Rossi Menezes, MD, PhD; Heloísa Garcia Claro, PhD; Lena R. Brandt, MA; Kate L. Daley, MSc; Julieta Quayle, PhD; Francisco Diez-Canseco, MPH; Tim J.

Peters, PhD; Daniela Vera Cruz, MSc; Mauricio Toyama, BA; Suzana Aschar, BA; Hellen Martins, BA; Victoria Cavero, BA; Thais Rocha, BA; George Scotton, MSc; Ivan F. de Almeida Lopes, PhD, MSc; Mark Begale, BA; David C. Mohr, PhD; J. Jaime Miranda, MD, PhD.

Introduction. Depression is a leading contributor to disease burden globally. Digital mental health interventions can address the treatment gap in low- and middle-income countries, but the effectiveness in these countries is unknown. We aimed to investigate the effectiveness of a digital intervention in reducing depressive symptoms among people with diabetes and/or hypertension.

Methods. Participants with clinically significant depressive symptoms (PHQ-9 ≥ 10) who were being treated for hypertension and/or diabetes were enrolled in a cluster randomized clinical trial (RCT) at 20 sites in São Paulo, Brazil (N=880), and in an individual-level RCT at 7 sites in Lima, Peru (N=432). The digital intervention was delivered over 6 weeks via a provided smartphone, based on behavioral activation principles, and supported by nurse assistants vs enhanced usual care.

Results. Among 880 patients cluster randomized in Brazil and 432 patients individually randomized in Peru, 807 (91.7%) in Brazil and 426 (98.6%) in Peru completed at least 1 follow-up assessment. The proportion of participants in São Paulo with a reduction in PHQ-9 score of at least 50% at 3-month follow-up was 40.7% in the digital intervention group vs 28.6% in the enhanced usual care. In Lima, the proportion of participants with a reduction in PHQ-9 score of at least 50% at 3-month follow-up was 52.7% in the digital intervention group vs 34.1% in the enhanced usual care group. At 6-month follow-up, differences across groups were no longer statistically significant.

Conclusions. In 2 RCTs of patients with hypertension or diabetes and depressive symptoms in Brazil and Peru, a digital intervention delivered over a 6-week period significantly improved depressive symptoms at 3 months when compared with enhanced usual care. However, the magnitude of the effect was small in the trial from Brazil and the effects were not sustained at 6 months.

Facilitators and Barriers of E-Mental Health Resources: Perspectives from Culturally Diverse Populations

Shawna Narayan [1,2], Sharan Sandhu [3], Hiram Mok [2], Kendall Ho [4], David Kealy [2]

1. Experimental Medicine Program, University of British Columbia
2. Department of Psychiatry, University of British Columbia
3. Surrey Mental Health and Substance Use, Fraser Health
4. Department of Emergency Medicine, University of British Columbia

Introduction: Evidence-based eMH approaches are available and apply to the general population; however, the literature demonstrates a relative paucity of research on eMH strategies tailored to culturally diverse populations. Technology can improve quality and access to this underserved population through e-mental health. However, these services must be culturally tailored for peak effectiveness.

Methods: This mixed-method study aims to investigate the use of e-mental health among ethnic minorities for anxiety and depressive disorders in an urban area. Participants (N=136) completed a survey regarding their eMH use, the severity of their depression and anxiety symptoms, and socio-demographic characteristics. Participants (N=14) shared experiences through semi-structured focus group discussions.

Results: Participants shared barriers and facilitators of help-seeking behaviours in the context of mental health care. Participants noted that e-mental health services were often too general and not personalized, challenging to navigate due to the abundance of information, and included wordy and scientific language, making it difficult to understand. Moreover, 68% of the participants shared that the e-mental health resources, overall, were not culturally tailored. Facilitators include accessibility, usability convenience, low cost of the resources used, and ability to use services privately. Recommendations include further developing culturally tailored content, including graphics, phrases, and lived experiences of CDPs, and efforts to reduce culturally linked stigma.

Conclusion: These findings will benefit ethnic minorities by providing health care professionals with a greater understanding of treatment needs in cultural groups and supporting the development of culturally relevant e-mental health resources and services for ethnic minorities.

Developing and Implementing a Machine Intelligence Mental Health System Navigation Chatbot to Support Healthcare Workers in Two Canadian Provinces

Ali Zamani; Osmar Zaiane (PI), Eleni Stroulia (co-PI), Vincent Agyapong (co-PI), Andrew J. Greenshaw, Simon Lambert, Dave Gallson, Ken Porter, Deb Turner, Jasmine M. Noble, Mohamad Gharaat, Isabella Nikolaidis, Dylan Merrick, Nathaniel Maeda, Rachel Goud

Department of Computing Science, Faculty of Science, University of Alberta, AB, Canada

Introduction: One in three Canadians will experience an addiction and/or mental health challenge at some point in their lifetime. Unfortunately, there are multiple barriers in accessing mental health care including system fragmentation, episodic care, long wait times, and insufficient supports for health system navigation. Additionally, stigma may further reduce an individual's likelihood to seek support. Digital technologies present new and exciting opportunities to bridge significant gaps in mental health care. Chatbots, i.e., software systems that use machine intelligence to carry out conversations with people, may be explored to support those in need of information and/or access to services, and present the opportunity to address gaps in care, on demand, with personalized attention. This pilot study seeks to evaluate the feasibility and effectiveness of a mental health system navigation machine intelligence chatbot (the Mental Health Virtual Assistant).

Methods: Participants will be healthcare workers and their families located in the Canadian Provinces of Alberta and Nova Scotia. The effectiveness of the technology will be assessed in comparison to the status quo health navigation service provision and will be evaluated through the triangulation of data from several sources, including voluntary follow-up surveys, and client engagement with the chatbot. Additionally, the collection and analysis of aggregate health system utilization data will be explored, assessing service use prior to, and following the chatbot deployment.

Results: This project was initiated April 1st, 2021. Ethics approval was granted on August 12th, 2021 by the University of Alberta Health Research Board. Data collection is anticipated to begin late 2021 into early 2022. Publication of a final report will be developed by March 31st, 2022.

Conclusions: Our findings can be incorporated into public policy and planning around mental health system navigation by any/all Canadian mental health care providers - from large public health authorities through to small community-based not-for-profits.

Fiji Regional Telehealth Project

Odille Chang 1, Brigid Ryan 2

1.College of Medicine, Nursing and Health Sciences, University of Fiji, Suva

2. International Unit, St. Vincent's Mental Health Hospital, Melbourne

Introduction: Conceptualised in March 2020 as a response to COVID 19, this project aimed to promote telehealth engagement aligned with the COVID-19 response for physical and social distancing. Telehealth was considered a valuable option for health-related disaster responses, and rural and remote health services, but had not been commonly used or promoted in Fiji mental health services. In partnership with St. Vincent's Pacific Health Fund, the Fiji National University's College of Medicine, Nursing and Health Sciences (CMNHS) established ICT for telehealth mental health services provided at the university, and through the Fiji Ministry of Health public mental health services.

Methods: This project evaluated the professional development sessions, which were held regularly throughout 2020. Feedback was sought from mental health clinicians for quality improvement of the regional professional development, and to understand participation and engagement with the online platform. Self rated measures offered insights for the value of the online professional development, and confidence in providing health care for children and young people. Qualitative data was analysed with a focus on experiences of training, including access, engagement and applicability of the initiative to the Pacific Islands health care organisations.

Results: Over 25 sessions, Pacific Island health workers were invited to professional development, with topics suggested by mental health workers meeting across the oceans and time zones. An average of 30 people attended each session, achieving an equivalent of 745 hours of Continuing Professional Development. Participants reflected that the sessions contributed to their own confidence and access to telehealth, and noted the value of intra-professional, international collaborations and peer exchanges.

Conclusion: This project established capacity and interest in telehealth initiatives for mental health services in Fiji. It engaged a wide range of multidisciplinary health workers and generated discussion for future projects. This project is an innovation during COVID for the provision of mental health services and training which can be used in other regional settings.

The Tapestry Tool: A Collaborative, Interactive and Non-Linear Online Learning Tool

Melanie Butt, Bitu Jokar, Steven J. Barnes

Introduction: The Tapestry Tool is a collaborative educational tool that encourages the integration of multimedia content within a non-linear format; we call these collections of content "tapestries." It has been used in postsecondary settings, research settings, and by non-profit organizations. For example, it has been used to improve health education via projects with the BC SUPPORT Unit (see <https://www.bcahsn.ca/our-units/bc-support-unit>) and TYDE (see <http://mytyde.ca/>).

Method: The development of the Tool was informed by usability testing data from over a thousand students, faculty, and staff at the University of British Columbia. Our team members used those data to drive an iterative design process: we discussed the user-testing data, integrated those results into the next iteration of the Tool, and then tested the new release of the Tool with a fresh set of users.

Results: The Large Tapestries Study we conducted is an example of this iterative design process.

Conclusion: This study presented various solutions for navigating and zooming within "large" tapestries (i.e., a tapestry with more than 20 nodes), and informed the development of the forthcoming iteration of the Tool: Tapestry 3.0.

Heartbeat - Creating Recovery Project: theatre as a tool for the inclusion of autistic people during the pandemic

- Mariana Salas – CRONICAS, Universidad Peruana Cayetano Heredia
- Daniela Weilg – CRONICAS, Universidad Peruana Cayetano Heredia
- Paul Heritage (PI) – People’s Palace Projects, Queen Mary University of London
- Francisco Diez Canseco (Co-I) – CRONICAS, Universidad Peruana Cayetano Heredia
- Mauricio Toyama – CRONICAS, Universidad Peruana Cayetano Heredia
- Aline Navegantes – People’s Palace Projects, Queen Mary University of London
- Pedro Pérez Rothstein – People’s Palace Projects, Queen Mary University of London

Introduction

The COVID-19 pandemic reduced the scarce supply of health, education and recreation services for people with Autism Spectrum Disorders (ASD) in Peru. In this context, through the Heartbeat Project, Flute Theatre –a British company– transferred the Hunter Heartbeat Method to La Plaza –a Peruvian company–. This method uses Shakespeare’s plays to provide a ludic theatrical experience that responds to the characteristics of autistic people where they are the protagonists, and, because of the pandemic, was adapted to the virtual space. The Heartbeat Project gathers universities and theatre companies from Peru and the UK to investigate the transfer of this virtual theatre method to the Peru, evaluating its benefits and potential future implementation.

Methods

Design: Case study.

Methods: Non-participant observations, interviews and focus groups.

Participants: 6 autistic people, 9 family members, 18 members of theatre companies, 20 observers (including officials, artists and activists).

Results

- Benefits for autistic people: Allows the opportunity to play and have fun; promotes their emotional well-being; encourages their communication and relationship with others; offers recognition; fosters self-esteem and self-worth; promotes cognitive, affective and motor skills; favours inclusion.
- Benefits for families: Offers a welcoming space for encounter and inclusion; allows them to share and know their children better through fun activities; and use theatrical games at home.
- Future transfer: Observers consider it necessary and feasible to transfer the method to schools, health centres, universities, artistic organizations and civil associations. They mention the need for public and private support, funding, human resources and access to technology as challenges that could be overcome through the articulation between public entities, optimization of resources to reach more autistic people, and involving community theatre groups.

Conclusions

The Heartbeat Project showed benefits for autistic people, their families and community, and demonstrated feasibility in transferring and using the Hunter Heartbeat virtual theatre method in Peru. There is great interest from Government and civil society stakeholders to continue and expand the project beyond artistic spaces.

Collaborative Care Model for Depression in Rural Nepal

Nandini Choudhury*, Pragya Rimal*, Bibhav Acharya, Pawan Agrawal, Madhur Basnet, Bhavendra Bohara, David Citrin, Santosh Kumar Dhungana, Bikash Gauchan, Priyanka Gupta, Tula Krishna Gupta, Scott Halliday, Bharat Kadayat, Ramesh Mahar, Duncan Maru, Viet Nguyen, Sanjaya Poudel, Anant Raut, Janaki Rawal, Sabitri Sapkota, Dan Schwarz, Ryan Schwarz, Srijana Shrestha, Sikhar Swar, Aradhana Thapa, Poshan Thapa, Rebecca White

Introduction: Patients in low-income countries lack access to effective mental healthcare despite a disproportionately high prevalence of depression. The collaborative care model (CoCM) is highly effective in improving mental health outcomes in primary care settings, with abundant evidence from high-income countries. Evidence from implementing CoCM in real-world settings is necessary to inform its expansion to help meet mental healthcare needs in low-resource settings.

Methods: We studied the implementation and clinical impact of CoCM at a primary care clinic in rural Nepal. We used the WHO Mental Health Gap Action Programme protocols and adapted CoCM using the Capability Opportunity Motivation-Behavior (COM-B) implementation research framework. Over a two year study period, we qualitatively assessed the intervention's implementation and impact on providers' behavior to screen, diagnose and treat mental illness. We studied clinical impact in a cohort of 201 patients with moderate to severe depression. Our primary outcome was the proportion of patients who demonstrated substantial clinical response (defined as $\geq 50\%$ lower Patient Health Questionnaire (PHQ) score to measure depression compared to baseline) after engaging in care through CoCM for at least 12 weeks.

Results: Providers reported improvements in their capability (knowledge and self-efficacy), and greater opportunity (through team-based work with a psychiatrist, counselors, and access to medications and diagnostic tests), and motivation to provide care for patients with mental illness. Among 201 cohort patients, we observed substantial clinical response in 99 (49%; 95% CI: 42% to 56%), with a median seven point (Q1:-9, Q3:-2) decrease in PHQ-9 scores ($p < 0.0001$) compared to baseline.

Conclusion: We successfully adapted and implemented CoCM in rural Nepal using the COM-B implementation research framework. We found that CoCM improved providers' perceptions and delivery of mental healthcare, and observed significant clinical improvement in patients with depression. We recommend adapting and studying CoCM in other low-resource settings to help meet the need for mental healthcare.

Strengths and challenges of virtual community-based participatory research: takeaways from a bipolar disorder mHealth project

Laura Lapadat [1], Emma Morton [1], Erin E. Michalak [1].
[1] University of British Columbia, Vancouver, BC, Canada

Introduction: The COVID-19 pandemic has rendered in-person community-based participatory research (CBPR) unsafe and impractical. A resultant shift to virtual CBPR represents a key opportunity to evaluate use of virtual community engagement methods, which hold potential to advance cross-regional collaboration in global mental health initiatives. Here, we describe one element of using a virtual CBPR framework to develop an mHealth intervention for bipolar disorder: namely, peer researchers' co-creation of short, affirmational messages for app users.

Methods: Peer researchers (N=5) were recruited from two online advisory groups of people living with bipolar disorder. Affirmational statements were written to take the form of app notifications. Peer researchers elected to write affirmations relevant to their experiences. Collaboration occurred via Google Sheets, in a document co-constructed with a peer researcher. Communication was over email and Zoom meetings; compensation was provided.

Results: A total of 1,582 affirmations were written between March and July 2021. A strength of online collaboration was flexibility around peer researchers' schedules and potential symptoms, which facilitated equitable contributions by ameliorating time, health, and geographical constraints. A communal atmosphere was established through advisory group activities and frequent meetings; a flattened power structure was promoted by elevating peer expertise alongside research evidence. Challenges included temporal difficulties and occasional ambiguity about project status. Some challenges were partially mitigated by use of collaborative software, which made it possible to view progress in real-time and gauge when peer researchers required check-ins.

Conclusions: Use of virtual CBPR comes with unique strengths and challenges. A key takeaway is that virtual community engagement methods can enhance equity by decentralizing collaboration and enmeshing lived expertise perspectives into project structure. Based on the success of an online-mediated CBPR framework on this project, we anticipate that virtual CBPR could be effectively utilized in crossregional projects to reach underserved or seldom-heard populations and advance global mental health equity.

REMAP-D Vision and Impact Statement

ubc.tapestry-tool.com/asia-pacific-equity-cluster

REMAP-D Member Tapestry

ubc.tapestry-tool.com/asia-pacific-equity-cluster/tapestry/remap-digital/#/nodes/9

APEC Digital Hub for Mental Health

mentalhealth.apec.org

Technology and Equitable Access for Mental Healthcare in a post-COVID Asia Pacific (TEAM-CAP) Study and Living Review

www.teamcap.ca

Murphy, et al. (2021) Needs, gaps and opportunities for standard and e-mental health care among at-risk populations in the Asia Pacific in the context of COVID-19: a rapid scoping review. Int J Equity Health 20, 161.

equityhealthj.biomedcentral.com/articles/10.1186/s12939-021-01484-5

University of British Columbia Mood Disorders Centre- Research, Education, Awareness and Care Hub

mood.med.ubc.ca

Collaborative REsearch Team to study psychosocial issues in Bipolar Disorder (CREST.BD)

crestbd.ca

Association of Pacific Rim Universities Global Health Program

apru.org/our-work/pacific-rim-challenges/global-health

APEC Digital Hub for Mental Health

Association of Pacific Rim Universities (APRU)

Canadian Biomarker Integration Network in Depression (CAN-BIND)

Conference Registrants and Attendees

Conference Speakers

Djavad Mowafaghian Centre for Brain Health

JEDI (Justice, Equity, Justice, Inclusion) Health Alliance

Margaret Koshi

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UBC Department of Psychiatry

UBC Grants for Catalyzing Research Clusters

Wegdan Abdelmoemin

Women's Health Research Cluster

**REMAP-D Cluster Leads**

Dr. Raymond Lam, Dr. Jill Murphy, Dr. Erin Michalak

REMAP-D Cluster Staff

Vanessa Evans, Veronica Caparas, Shweta Parmar

We invite you to learn more about [us](http://mood.med.ubc.ca/remap-digital).

Visit our website: mood.med.ubc.ca/remap-digital