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ACCELERATING RESEARCH



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Singapore Mental Health Study 2016

The Singapore Mental Health Study 2016, led by the Research Division, IMH, established the prevalence of important mental disorders in Singapore residents aged 18 years and above, identified treatment gaps in mental healthcare and investigated the personal and economic impact of major mental disorders. Investigations also include the association with physical illnesses, the effect of mental disorders on work productivity, the help-seeking pattern of the local population, and comparison with the findings of the last study conducted in 2010. **This is the most comprehensive study conducted to date** and was repeated after a period of 6 years using the same methodology which allowed assessment of changes and patterns in the mental health status of Singapore residents. The field work of the study was carried out over one and half years from 2016. A total of 6126 residents participated in the study, giving a high response rate of 69%.

The study provided insight into the number of people with common mental disorders in Singapore and found that one in seven people had experienced a mental disorder in their lifetime. Among the disorders assessed in this

study, the following emerged as the top three disorders in Singapore:-

- Major depressive disorder - affecting one in 16 people;
- Alcohol abuse - affecting one in 24 people; and
- Obsessive compulsive disorder - affecting one in 29 people.

The findings also showed that socio-demographic characteristics such as age, gender, ethnicity, marital status, education, employment and income status were associated with the prevalence of mental disorders. **The study also identified a large treatment gap for mental healthcare** with the majority with mental disorders not seeking help.

Establishing the prevalence of key mental disorders and their impacts on the individuals and the society as a whole has several population health implications. **Understanding these will allow planning of appropriate services, awareness, outreach and early help-seeking efforts in the population.**

Associate Professor Mythily Subramaniam, Director, Research Division, IMH and Co-Principal Investigator of the study, said:

"Serial epidemiological studies allow us to both look at emerging disorders in the population and evaluate the effectiveness of community interventions. The team is still analysing the data and hope to present all the relevant results by early 2020"



SMHS 2016 Research Team

From left to right: Ms Saleha Shafie, Ms Sherilyn Chang, Ms Anitha Jeyagurunathan, Ms Nurulfathiyah Thoimi, Prof Chong Siow Ann, A/Prof Mythily Subramaniam, Dr Edimansyah Abidin, Ms Janhavi Vaingankar, Ms Carol Zhang

Contributed by:

Research Division, Institute of Mental Health

Learning from Primary Care Research & Healthcare Improvement Expert

Professor Martin Marshall, Family Physician & Professor of Healthcare Improvement at University College London, visited NHGP from 1 – 5 April 2019. Prof Marshall conducted a **2-day workshop on qualitative research, specifically focusing on the novel Researcher-in-Residence model**, which involves embedding researchers within healthcare settings.

The Researcher-in-Residence model is an emerging model of participative research, particularly in healthcare quality and service improvement. By leveraging the 'co-creation' of knowledge between researchers and healthcare practitioners, this model seeks to increase research impact and add value in real-life settings. **Practitioners and researchers alike grow through shared learning and dialogue as researchers are immersed in the healthcare system to study**

a particular issue. This model emphasises initiating change through an in-depth understanding of the issues at play, while resolving practical problems through collaboration, negotiation and compromise. There is also a **strong emphasis on reflection and collective inquiry**, as the researcher works with and is embedded within a programme team.

Researchers from NHG institutions were invited to participate in the workshop, which was well-received as **Prof Marshall engaged in lively exchange on experiences and ideas of conducting participatory research in primary care, and translating research findings into evidence-based practice.** Prof Marshall provided valuable recommendations to the programmes and research projects that were presented at various roundtable discussions, and also met with NHG's Senior

Management to discuss evaluations of health service redesign improvement and primary care models in the world.

Prof Marshall, who has been awarded a CBE in the Queen's Birthday Honours for Services to Health Care in 2005, was recently elected as the Chair of the Royal College of General Practitioners. He was impressed by NHGP's research and healthcare improvement efforts, and expressed confidence in their potential for high-quality research. **His visit has provided NHGP with valuable insights into primary care research and healthcare improvement, and has led to further collaborations with Prof Marshall to advance primary care research and healthcare improvement in NHGP.**

Contributed by:
NHG Polyclinics



Professor Martin Marshall with session participants from NHGP and NHG



Demonstration of conducting a focus group discussion

Outcomes of the NMRC May and November 2019 Call for Applications

Congratulations to the NHG researchers who have received the National Medical Research Council (NMRC) Talent Development Awards and Research Grants during the May and November 2018 NMRC calls for applications respectively.

May 2019 Call for Applications			
Name	Institution	Project Title	Award
Dr Michael Yam Gui Jie	TTSH	S.P.A.R.T.A.N trial Sarcopenia Prevention And Reversal with physical Training And Nutrition in distal radius fracture patients	NMRC Research Training Fellowship
Dr Tan Yi Jia Bryan	WHC	Collaborative Model of Care between Orthopaedics and Allied Healthcare Professionals Trial (CONNECT)	NMRC Research Training Fellowship
Dr Lam Chih Chiang, Benjamin	KTPH	Investigation Of Environmental, Genetic And Gut Microbial Factors Underlying Obesity Amongst Chinese, Malay And Indians In Singapore	NMRC Research Training Fellowship
A/Prof Angela Chow Li Ping	NCID / TTSH	Patient, Physician, and Organizational Factors Influencing Decision-Making for Antibiotic Use, and N-of-1 Trials of Interventions to Improve the Decision-Making	Clinician Scientist Award-Investigator Category
A/Prof Lim Su Chi	KTPH	Novel genetic and non-genetic risk factors for endothelial dysfunction and diabetic micro-angiopathies – meeting future challenges	Clinician Scientist - Individual Research Grant
Dr Sadarangani Sapna Pradip	NCID / TTSH	Probing the Immunometabolic Factors of Influenza Vaccine Immune Response in Singapore Elderly	Clinician Scientist - Individual Research Grant - New Investigator Grant (CNIG)
Dr Tor Phern Chern	IMH	A pilot study of intermittent accelerated burst transcranial magnetic stimulation (aTBS) to treat depression: a randomized, single-blind, delayed-start trial	Clinician Scientist - Individual Research Grant - New Investigator Grant (CNIG)
Dr Sun Yan	NHGHQ	Diabetic foot ulcers among patients with Type 2 Diabetes Mellitus: lifelong cost, risk prediction and cost effectiveness of risk tailored diabetic foot screening in Singapore	Health Services Research Grant (HSRG)
Dr Hum Yin Mei Allyn	TTSH	Predicting Survival in End Stage Organ Disease: Developing and Validating Prognostic Models	Health Services Research Grant (HSRG)

November 2019 Call for Applications			
Name	Institution	Project Title	Award
Dr Serena Low	KTPH / AdMC	Understanding the Paradigm of Elderly and Middle-Age Onset of Diabetes	NMRC Research Training Fellowship
Ms Janhavi Ajit Vaingankar	IMH	Youth Positive Mental Health: Getting the Full Picture	NMRC Research Training Fellowship
A/Prof Tan Ern Yu	TTSH / LKC Medicine	Clinical evaluation of a novel 20-gene signature as a biomarker and metabolic target in breast cancer stem cells	Clinician Scientist Award-Investigator Category
Asst Prof Ng Oon Tek	NCID / TTSH	Oral capsule-administered faecal microbiota transplantation for intestinal carbapenemase-producing Enterobacteriaceae decolonization	Clinician Scientist Award-Investigator Category
Dr Kalisvar Marimuthu	NCID / TTSH	Household transmission of carbapenemase-producing Enterobacteriaceae Singapore: A cohort study	Clinician Scientist - Individual Research Grant (CSIRG)
Dr Danson Yeo	TTSH	Intra-gastric fundal and body injection of Botulinum Toxin A for weight loss, a Randomized Controlled Trial	Clinician Scientist - Individual Research Grant - New Investigator Grant (CNIG)

To find out more about the NMRC Talent Development Awards and Research Grants, please click [here](#).

Congratulations to the following Award Recipients!

Annals, Academy Of Medicine Best Publication Award 2018

Ms Vathsala Sagayadevan (former Research Officer, Research Division, IMH) and her co-authors from the IMH Research Division were awarded the Annals, Academy of Medicine Best Publication Award 2018 – Bronze for their article titled, **Quality of Life across Mental Disorders in Psychiatric Outpatients** published in the July issue of the journal last year.

Associate Professor Mythily Subramaniam received the award on behalf of the team.



Dr S R E Sayampanathan (Master, Academy of Medicine Singapore) presenting the award to Associate Professor Subramaniam

European Association of Psychosomatic Medicine (EAPM) – Young Investigator Award 2019

The EAPM Young Investigator Award is an established scientific award for young investigators in the field of psychosomatic medicine, consultation-liaison psychiatry and integrated care. **Mr Liu Jianlin, Research Assistant from Research Division** received this award based on his article titled, **Beyond the fear that lingers: The interaction between fear of cancer recurrence and rumination in relation of depression and anxiety symptoms** published in the August issue of the Journal of Psychosomatic Research last year.

GOOD TO READ!

Guidelines for Reporting of Statistics for Clinical Research in Urology

Sound reporting of statistics in clinical research is often absent. In this article, **statisticians share a set of guidelines to address common errors in statistical analysis, reporting and interpretation.** Although these guidelines were developed with the aim of improving the quality of statistical reporting in manuscripts submitted to urology journals, the general principles can be applied to manuscripts being submitted to any medical discipline journal.

Click [here](#) to read now!

Association of Unrecognized Obstructive Sleep Apnea with Postoperative Cardiovascular Events in Patients Undergoing Major Noncardiac Surgery

Obstructive sleep apnoea (OSA) is the most common type of sleep-disordered breathing. It is a clinical syndrome characterized by repeated partial or complete upper airway obstruction during sleep.

OSA has been studied and shown to be associated with adverse long-term cardiovascular outcomes from epidemiological studies. It is however unclear if the same complications may be extrapolated to patients coming for surgery. The current scientific literature on this matter is conflicting. Furthermore, we know that a large percentage of perioperative patients have undiagnosed OSA; but data is lacking in Asia.

The Postoperative Vascular Complications in Unrecognized OSA (POSA) investigators set on to do a multi-centre prospective study from 2012 to 2017 in more than 1,200 patients from Singapore, Malaysia, Hong Kong, New Zealand and Canada. The purpose was **to determine if there was an association between OSA presence and severity with 30-day cardiovascular adverse events in adult patients (45 years and older with one or**

more cardiac risk factors) scheduled for major non-cardiac surgery. Home sleep apnoea testing using a type 3 portable sleep monitoring device (Apnealink, ResMed) was performed for all patients before the surgery.

According to the sleep study, patients were stratified into 4 groups - 1. No OSA, 2. Mild OSA, 3. Moderate OSA, and 4. Severe OSA. The specific objective of the study was to see if any of these 4 groups of patients were associated with increased incidence of a composite outcome measure of heart muscle injury, heart attack, irregular heartbeat, stroke, serious blood clots in the veins or death due to heart-related causes. We found that the majority of patients had unrecognized OSA – 37% with mild OSA, 19% with moderate OSA and 11% with severe OSA. **Severe OSA was found to be associated with postoperative heart-related complications by 2.3 times and heart-related deaths by 13.6 times compared to patients without OSA.**

Physicians taking care of perioperative patients should be aware that OSA, together with its co-morbidities, presents as an important risk

factor during the period around surgery. Future studies would be necessary to see how these risks can be modified or reduced.

To read the full publication, please click [here](#).



POSA investigators (from left to right):
Prof Wang Chew Yin (Malaysia),
Prof Frances Chung (Canada),
A/Prof Edwin Seet (Singapore) and
Prof Matthew Chan (Hong Kong).

Contributed by:
Assoc Prof Edwin Seet
Head & Senior Consultant
Department of Anaesthesia
Khoo Teck Puat Hospital

Quality of Life Study

Institute of Mental Health (IMH) and National Council of Social Services (NCSS) are undertaking **two studies to measure the quality-of-life of the mental health populations in Singapore** :-

- 1) Quality of Life of Children, Youth, and Caregivers; and
- 2) Quality of Life of Caregivers.

The studies examine the quality-of-life outcomes related to young persons' personal and psychological well-being, their relationships with friends, family, teachers and schoolmates as well as their sense of social acceptance. Furthermore, the studies aim to identify the profile and needs caregivers in terms of their needs and feelings of efficacy in providing care to young persons with mental illness. By ascertaining these gaps and needs will **help social services improve resource prioritisation and policy review**.

Description of questionnaires to be administered

Quality of Life of Children, Youth, and Caregivers	Quality of Life of Caregivers
<p><u>Child participant</u></p> <p>(i) KIDSCREEN A measure of general quality of life of children and youth concerning social support, physical and psychological well-being and school environment</p> <p>(ii) DISABKIDS Chronic Generic Measure (DCGM) A measure of quality of life specific to children and youth with health/developmental condition relating to social, emotional well-being and medication</p> <p><u>Caregiver participant</u></p> <p>(i) WHO Quality of Life-BREF (WHOQOL-BREF) A measure of quality of life of adults in terms of physical, psychological and social well-being</p> <p>(ii) Caregiver Reaction Assessment (CRA) A measure of positive and negative aspects of caregiving</p> <p>(iii) Pearlin Mastery Scale A measure of the overall sense of self-efficacy felt by caregivers</p>	<p><u>Caregiver participant</u></p> <p>(i) WHO Quality of Life -BREF (WHOQOL-BREF) A measure of quality of life of adults in terms of physical, psychological and social well-being</p> <p>(ii) Caregiver Reaction Assessment (CRA) A measure of positive and negative aspects of caregiving</p> <p>(iii) Pearlin Mastery Scale A measure of the overall sense of self-efficacy felt by caregivers</p> <p>(iv) WHO Disability Assessment Schedule (WHODAS) A measure of the overall level of functioning of care-recipients with caregiver as proxy respondent</p>
<p><u>Principal Investigator</u></p> <p> Adj Assoc Prof Ong Say How Senior Consultant / Chief Department of Developmental Psychiatry and Senior Consultant, East Region</p>	<p><u>Principal Investigator</u></p> <p> Dr Wei Ker-Chiah Senior Consultant Department of Developmental Psychiatry and Chief, West Region</p>

Contributed by:
Department of Developmental Psychiatry, Institute of Mental Health

My PhD Journey – A Mixed Methods Approach towards Understanding the Place of Death

Having worked as a health economist for eight years before embarking on this learning journey, it was not certain what this might bring. But it did begin with an open mind. **While the research initially set out to examine how to better honour, and to increase the numbers and the share of home deaths, there was a quick realisation that these preferences or choices are much more complicated than media reports or even research literature might suggest.** This led to a reconsideration of the direction and methodological approach of this research. Armed with the belief that research methodologies and tools should be appropriately selected for answering the questions, **qualitative research methodologies were incorporated into this research.** This truly expanded my repertoire of research skills beyond quantitative methodologies, and

provided richer insights into understanding the phenomenon of dying at home using an integrative approach.

In the conduct of the focus group discussions and interviews with patient-family caregivers, I was astounded by the generosity of the research participants in the giving of their time, and their candid sharing of experiences, insights and ideas related to end-of-life care. **Although some patients were terminally ill, they still chose to spend an hour of their precious time to talk to us, stemming from a deep desire to help improve care for others.** Personally, this created meaning for the research process; as did the reflexive nature of the method. Working closely with a team trained in qualitative research methodologies also supported my training in this approach.

The differences between the qualitative and quantitative approach were sometimes difficult to navigate, requiring different ways of skills and ways of perceiving the world. Nonetheless, I truly feel that **my work is richer for having adopted a multiple-methods approach.** There remains more work to be done to further this line of inquiry, requiring both quantitative and qualitative approaches.



Contributed by:
Dr Tan Woan Shin
Principal Research Analyst
Health Services and Outcomes
Research, NHG

NHG-LKCMEDICINE CLINICIAN-SCIENTIST DEVELOPMENT PROGRAMMES FY2020 Call For Applications is now open!

Clinician–Scientist Preparatory Programme
(CSPP)

Clinician–Scientist Career Scheme
(CSCS)

Submission Deadline for LOI, Abstract & CV: Tuesday, 29 Oct 2019, 12pm
Submission Deadline For All Other Application Materials: Tuesday, 12 Nov 2019, 12pm

CLICK [HERE](#) TO FIND OUT MORE

Nursing Research in Primary Healthcare

Nurses in our polyclinics work alongside with medical and allied health professionals to provide patients with quality care backed by evidence. **At NHGP, Evidence-based Nursing and Research Communities of Practice (CoP) is the platform for nurses to research and obtain the best evidence to improve standards of care.** Whilst we strengthen the capacity and capabilities of nursing research, we have built a team of 18 CoP members with different areas of clinical interest from various NHG polyclinics. We had also bagged several awards from SHBC Primary Care Research Awards for both oral and poster categories in last two years.

This year, we won the **“Best Poster Award” at the Asia Pacific Diabetes in Pregnancy Conference**

for the study titled “Dietary Risk Assessment of the Singapore Child”. The findings of the study were used as reference for the paper “Guidelines on Optimal Perinatal Nutrition” which was officially published and commissioned by the Perinatal Society of Singapore. Last year, our **collaboration with NTU Lee Kong Chian School of Medicine (LKCMedicine) in wound research** opened up a window of opportunity for us to expand our research network.

In the present-day, nursing research in primary healthcare focuses on developing models of care through patient activation; leveraging on the use of digital technologies in the delivery of healthcare; and identifying high risk populations and developing interventions to improve the

health outcomes of these groups.

As we move forward in strengthening primary healthcare, nursing research is an area that should not be overlooked. Nursing has always worked hand-in-hand with other departments and have collaborated with other institutions in areas such as health promotion, preventive health and the development of new models of healthcare delivery. We look forward to bringing nursing research to greater heights in primary healthcare.



Contributed by:
Ms Goh Ling Jia
Assistant Nurse Clinician
Nursing Services
NHG Polyclinics

Training Calendar

Date	Training Courses	Course Provider
Monthly	Good Clinical Practice (Online)	NHG RDO
	(PCR100) Study Start-Up: Budgeting, Case Report Form Design and Database Design*	
	(PCR200) Study Conduct I: Subject Recruitment and Informed Consent*	
	(PCR300) Study Conduct II : Documentation, Safety Reporting and Investigational Products*	
	(PCR400) Monitoring, Audits and Inspections*	
15 Oct 19	Health Related Quality-Of-Life (Beginners)	TTSH CRIO
25 Oct 19	Basic SPSS Workshop (2)	NHG RDO
06 Nov 19	Questionnaire Design	NHG RDO
11 Nov 19	Using RedCap to Build Your Database	TTSH CRIO
18 Nov 19	Working with Excel the Smart Way (1)	
28 Nov 19	Endnote X7 Workshop	
03 Dec 19	Basic Grant Writing	

*Blended learning courses involving Online Lectures coupled with a Classroom Workshop on a stipulated date.

Dates are subject to changes without prior notice.

For registration and full details on courses by:

~ NHG Research & Development Office (RDO), please visit www.research.nhg.com.sg
(Training & Education → Register for Courses and Other Events)

~ TTSH CRIO, please contact Ms Siti Aisha Binte Jaffar Siti_Aisha_JAFFAR@ttsh.com.sg

CHICKEN SOUP FOR THE BUSY CO-ORDINATOR

Education to facilitate high standards of research conduct

1. Apr 2019: Essential Documents – Setting Up and Maintaining the Investigator File
2. May 2019: Witness Requirement for Informed Consent Process
3. Jun 2019: What constitute a Minor or Major Protocol Amendment according to the NHG DSRB
4. Jul 2019: Clinical Research Material (CRM) notification for Clinical Research involving Medical Devices
5. Aug 2019: Death & Safety Event Reporting Requirements to DSRB

Click on the respective points to find out more!