

INVITED LECTURE**WILEY****Keynote Lecture****KL1 | The past, the present and the future of PRCP****Min-Soo Lee***Department of Psychiatry, Korea University College of Medicine, Korea*

The Pacific Rim College of Psychiatrists (PRCP) works with its member countries around the Pacific rim to promote mental health and to encourage the highest possible standards of clinical practice and ethical behavior in psychiatry. The PRCP also works to secure the best outcomes for people with mental illness by promoting excellent mental health services, supporting the prevention of mental illness, training outstanding psychiatrists, promoting quality and research, setting standards and being the voice of psychiatry across the Pacific rim countries. The PRCP works to disseminate knowledge about evidence-based psychiatric treatments and values-based practice; to be a voice for the dignity and human rights of patients and their families; and to uphold the rights of psychiatrists where they may be challenged. Most importantly, it acts to facilitate communication and provide assistance to societies who are isolated or whose members work in impoverished circumstances. I suggest the following future agenda for the PRCP in my lecture: 1) Action on the socioeconomic inequalities in mental health; 2) Improving mental health care systems in the Pacific rim; 3) Fighting against stigma of psychiatric treatment; 4) Improving quality of psychiatric training and education; 5) Remaining up to date and educated in digital psychiatry; 6) Role of psychiatrists in post-pandemic era.

Plenary Lecture**PL1 | Linking community development and women's mental health****Helen Herrman***Centre for Youth Mental Health, The University of Melbourne, Australia*

The mental health of women and girls is connected closely with their social and family lives, and with community attitudes to gender and violence. For those living in poverty, subject to violence, or displaced by conflict and natural disasters this has special meaning. Poor mental health continues to cause widespread suffering. However the mental health needs of women and girls are often neglected.

Meeting these needs requires a coordinated public policy and public health response, including promotion of health and the prevention and treatment of mental ill health. Psychiatrists and other mental

health specialists have active roles in strengthening community capacity to respond to the needs in various ways: through engaging primary health workers and communities in mental health work; through their direct clinical actions; and through their roles in public mental health and advocacy.

PL2 | What we learn from our ancestors and pioneers in the history of psychotherapy**Bou-Yong Rhi***C. G. Jung Institute of Korea, Korea*

The schools of psychotherapy have one common principle: to see the patient as a whole. The scope of wholeness may be different, but every psychotherapist tries to understand not only the psychopathological manifestations but also the whole personality. The therapist is also expected to encounter the client with his or her whole existence. In this brief lecture I am going to speak on the various attempts of our forerunners who have opened the gate toward the world of psychic totality. At the same time, I wish to express my opinion on the future of psychotherapy and psychiatry, especially in reference to the training psychiatry specialist in the psychotherapy.

PL3 | Dementia prevention and translational research in the community**Kua Ee Heok***Department of Psychological Medicine, National University of Singapore, Singapore*

The dementia prevention program was launched in 2013 to ascertain whether psycho-social interventions through group activities together with health education on lifestyle could prevent or delay the onset of dementia. A cohort of 1000 elderly people living in the community will be followed up for 10 years. Every elderly person had a thorough physical, mental and social assessment, including blood examination and neuropsychological tests - MRI brain scans were carried out for those with mild cognitive impairment or dementia.

The first study group comprised 110 Chinese elderly with mild impairment of cognition was a naturalistic study. Each meeting began with a 20-minute talk on health issues, including stabilizing diabetes mellitus and hypertension with medication, diet and fall prevention. After the talk, participants were divided into four groups for art activities, tai-chi exercise, mindfulness practice and music-remembrance - this session lasted 30 minutes. After the first month, there was a significant

improvement in the group on music-remembrance in depression and anxiety scores. However, by the third month there was significant improvement in all the four modalities. In cognition (memory, concentration and orientation), after a year 22% improved and 24 percent remained stable. There were four randomised controlled trials (RCT) on mindfulness awareness practice, art activities and music-remembrance, choral singing and horticultural therapy. Besides neuropsychological tests and rating scales for mood, we had biological markers like brain scans (MRI), telomere length, oxidative stress tests, immunological studies and assessment of gut bacteria.

The results of the RCTs and findings of the 5-year follow-up study will be presented.

PL4 | An integrated view of complex psychiatric phenotypes

Shigenobu Kanba

Department of Neuropsychiatry, Kyushu University, Japan

The current diagnostic classifications are mainly classifications of syndromes that comprise subjective symptoms. A syndrome is a group of symptoms that occur simultaneously with a particular pathological condition. These symptoms may not necessarily all appear, but as they are derived from the same etiology, they indicate a single orientation and are thus a starting point for approaching the true nature of a certain condition or disease. The hope of this approach is that turning the spotlight of research onto syndromes will make it possible to approach their causes. There are some diseases, such as Rett syndrome, for which the causes have been elucidated and that have been separated from mental disorders. From this approach it has become clear that the current classification categories have included multiple pathologies, so that there are no straight paths in the quest to determine the cause of diseases, and this problem is blocking progress.

Even with research into Alzheimer's disease, for which the pathology is relatively well understood, we still face the challenge of identifying the circuits that are the basis of psychiatric symptoms. In neuropsychological terms, it is relatively easy to locate the symptoms in the particular locations of brain. For example, short-term memory impairment relates to the hippocampus, agnosia and apraxia to the parietal lobe, and so on. However, we might ask why one person manifests apathy or agitation, while another person exhibits hallucinations, delusion, confusion, and delirium. No one has the answer. Here too, we can grasp the difficulty of linking psychiatric symptoms to their neural basis.

The Genain monozygotic quadruplets have taken on a symbolic association with the genetic cause of schizophrenia because all four sisters developed the disease. Nonetheless, they presented numerous discrepancies in their respective trajectories and prognoses, so they also showed us the complexity of the part that genetic factors play in the disease. In one large Scottish family of four generations, a translocation occurring on the 11th autosome is dominantly inherited. However, mental disorders in various different categories have been found in this family, including recurrent depression, generalized anxiety disorder, schizophrenia spectrum disorders, and adolescent conduct disorder. With 22q11.2 deletion syndrome, also known as DiGeorge

syndrome, deletion of over 40 genes causes effects on various different organs, and this is combined with a high incidence of mental disorder. However, the phenotypes vary, and, moreover, they change as the brain develops. These findings suggest that, even if the causes are the same, symptomatic phenotypes vary widely. A mental disorder is a disease with a complex system produced by intricate interrelations between genetic and environmental factors.

Research into mental disorders has consequently advanced in a multimodal fashion, with research methods being developed variously at genome level, protein level, cellular level, and neural circuit level. However, at all stages from genome to protein, from protein to cell, from cell to circuit, and from circuit to psychological behavior and mental disorder, the environment—that is to say, the psychosocial, cultural, and ecological environment—interrelates with genetics at the level of the molecules and the level of its information (experience), thus influencing the formation and function of circuits. Consequently, if we are to understand the full picture, it is essential to promote multimodal research into pathology at each level.

A birth cohort has been studied over many years in the small New Zealand town of Dunedin, which has a population of some 10,000. This has been the fieldwork for over 1,100 papers to date, and the results have contributed to public health policy not just in New Zealand, but throughout the world. Various types of information ranging from genome data to psychosocial environment have been examined in detail, and the interrelation between genetics and the environment in the onset of mental disorder has been studied over several decades.

Bringing multimodal research into this sort of genomic birth cohort study in order to carry out careful, person-based research into the onset of mental disorders is surely one of the most needed projects for biomedical research today. Our understanding of the pathology of epilepsy and its treatment developed rapidly when brain waves were discovered and it became possible to measure them. Similarly, we need evolutionally innovations in methodology to be able to measure the neural base of psychiatric symptoms.

Special Lecture

SP1 | Optimising treatment outcomes in bipolar disorder

Chee Ng

Department of Psychiatry, University of Melbourne, Australia

Bipolar Disorder(s) is common affecting more than 1% of the population according to a world mental health survey. It is a chronic episodic disorder and is a leading cause of disability associated with functional impairment and increased morbidity and mortality. Early and accurate diagnosis of bipolar disorder is clearly important but challenging due to the variable symptoms, mood states, comorbidities and lack of recognition. Although there have been many advances in therapies, the treatment is often suboptimal and complex. Psychotherapeutic and psycho-educational interventions are often critical for successful adherence to treatment. The presentation will review the pharmacological treatment and combination therapy options currently available

as well as some emerging treatments for bipolar disorder. Appropriate treatment goals would include not merely improvement of functioning and quality of life but also optimising recovery and minimising treatment side effects.

SP2 | Mental health of hospital workers in a world in disarray

Mian-Yoon Chong

Department of Psychiatry, Kaohsiung Chang Gung Memorial Hospital, Taiwan

Natural and man-made disasters occurred more frequently in recent decades along with the growing global population, destructions of natural habitat, warming of global temperatures, increasing human conflicts and wars. Tragedies continued, but in recent history, the year 2020 could be considered as one of the most chaotic year overshadowed by the global pandemic of Covid-19 that seriously threatening the lives and livelihood of everyone on earth. With misinformation and mismanagement in early phase, it has resulted deaths of millions of human lives. In many countries, health care system collapsed due to failure of their national public health policy and hospitals were overwhelmed with patients infected with Covid-19 while running short of medical supplies, manpower and support, instigating a 'medical disaster'. Many healthcare workers have never been exposed to such a critical condition before. Without adequate and proper personal protection equipment, they could easily turn out to be the next victims. Such eminent threats could cause an extensive psychological and social impact of their health.

Recent studies revealed that one quarter to three quarters of the healthcare workers have psychological distress during the Covid-19 pandemic, with symptoms suffering from depression, anxiety, sleep disorder, and other syndromes related to obsessive-compulsive behavior and post-traumatic stress disorders. Impact from burnout, being stigmatized, fear of being contracted, guilt of transmitting infection, increasing isolation and frustration and events of suicide had been reported.

In a follow-up survey of the mental health of hospital workers a year aftermath the 2003 SARS epidemics, strong resilience was observed. The hospital that had been severely affected by SARS had resumed normalcy to the pre-epidemic stage. One of the influencing factors was the thorough revisions of its reactive and proactive strategy towards disaster management, emphasizing adequate human resources, training and support, and comfortable stocks of personal protection equipment and medical supplies. In the care of Covid-19 patients, team cooperation with sharing of information, daily monitoring of the health and psychological support of workers were enhanced. Strict infection control procedure was enforced with routinely screening of potential cases, social distancing, hand sanitization,

and mandatory wearing of surgical mask for all patients, workers and visitors at all time. As a result, there were no significant increase of psychiatric morbidity among the hospital workers in the recent survey during the Covid-19 pandemic.

In this constant changing world, existential threats are a reality of life on earth, so does the Covid-19 pandemic. Although it is devastating, but pandemics are nothing new. Many people might not remember the earlier coronavirus pandemics but what we are experiencing now is just like what we had been through during the SARS pandemic 18 years ago. What we had learned from the lessons in the past are equally effective in containing the Covid-19 and other future epidemics. In order to reduce the impact of Covid-19 pandemic and other future outbreaks, it is now the right time to build the resilience of healthcare organizations and their workers.

SP3 | WPA's mission, vision & action plans

Afzal Javed

President, World Psychiatric Association, Pakistan

WPA is an association of national psychiatric societies aimed to increase knowledge and skills necessary for work in the field of mental health and the care for the mentally ill. Its member societies are presently 138, spanning 118 different countries and representing around 250,000 psychiatrists from all over the globe.

WPA's core mission is to promote the advancement of psychiatry and mental health for all people of the world. This mission is achieved by increasing knowledge and skills about mental disorders, encouraging the highest possible standards of clinical practice, advocating for the dignity and human rights of the patients and their families, and to uphold the rights of psychiatrists through facilitating communication and assistance especially to societies who are isolated or whose members work in impoverished circumstances.

WPA achieves these objectives by organising meetings, arranging special discussion groups and formulating guidelines, position statement and issuing professional directions for its membership.

This presentation gives an overview of the vision, mission and philosophy of WPA work with a special emphasis on the current action plan (2020-23). Salient features of current plans will be discussed giving further details of the current work of different WPA components. The presentation will also provide a general framework of WPA functioning and would argue for promoting and strengthening the current initiatives getting further support from psychiatrist community.

Symposium 1

Effects of threatening of COVID-19 and side effects of the lockdowns on the patients with mental disorder**SM01-01 | Mental health care team for medical personnel during the COVID-19 pandemic in Tokyo, Japan****Shiori Noguchi***Department of Psychiatry and Behavioral Sciences, Tokyo Medical and Dental University, Japan*

The COVID-19 pandemic has induced not only physical damage in COVID-19 patients but an unprecedented psychological crisis in the general population all over the world. The pandemic started March 2020 in Japan. Japanese Government announced the State of Emergency on April 7th, 2020. In light of the announcement, Tokyo moved into “mild lockdown”. During this period, the citizens experienced psychological stress. As the pandemic prevailed, the Medical Hospital of Tokyo Medical and Dental University decided to tackle COVID-19 and started to accept COVID-19 patients in April 2020. Since medical personnel who engaged directly in the care of COVID-19 patients were thought to be especially at high risk of mental health problems due to their extreme psychological stress to face the novel virus, according to reports from China, Europe, and USA, the hospital countermeasures office realized the need to provide mental support for the hospital staff in the early phase. Therefore, the office organized the Mental Health Care Team, which was comprised of members of the Department of Psychiatry along with the Nursing Department, the Department of Palliative Care, and Health Administration Center on 6th April. Here, we introduce the activities of the Team.

First, the Team had a face-to-face interview with the hospital staff to provide information on mental health problems which can be seen in medical personnel under the pandemic. The information included psychological stress specific to healthcare professionals, such as strong anxiety and fear of catching or spreading COVID-19, and vicarious trauma. We also informed them that they could experience discrimination and prejudice. We warned them to be aware of burnout syndrome and encouraged them not to change life style. The hospital staff were evaluated their depression and anxiety with standard scales.

We then identified individuals at high risk of depression and/or anxiety based on the interview, and asked them to undergo our monthly follow-up interview, in which we provided psychological care and referral to an appropriate specialist if necessary. These are our approaches to the mental health problems at the individual level. So far, the members of the Team have interviewed 1,212 hospital staff in total (335 nurses, 596 doctors, 65 co-medical staff, 216 office workers).

At the organization level, we facilitated smooth communication between staff by asking them if they had any problems. Social and

psychological problems that we identified through the activities were fed back to appropriate sections in the hospital. We also noticed that there were interdepartmental conflicts that stem from the inequalities of burden and miscommunication between COVID-19- and non-COVID-19-related departments. These sorts of issues could also be disputed within a department. Insufficient information may deteriorate senses of comprehensibility and manageability, which lead to be burnout syndrome. The information on the conflicts were shared with the headquarters at the hospital. These activities seemed to be effective to reduce the stress in the hospital staff.

Psychological responses to COVID-19 of the hospital staff have been changed according to the phase of the pandemic. The responses to the questionnaire showed a trend of improvement in the levels of anxiety and depression during the three months after the declaration of the State of Emergency in April. However, the medical staff's condition worsened again after July 2020. This is probably due to the prolonged struggle with COVID-19 and the challenge of balancing COVID-19 related work and the regular work. This time course suggests that the ongoing activities of the Mental Health Care Team would be necessary.

In summary, our activities indicate that mental health problems in medical professionals is crucial in the COVID-19 pandemic, and that mental health support for the staff should be incorporated in the COVID-19 countermeasures at the individual and organization levels. In addition, the supports should be modified according to the phase of the pandemic.

SM01-02 | Development of Tokyo Metropolitan Distress Scale for Pandemic (TMDP), for assessing mental and social stress of medical personnel in COVID-19 pandemic**Miho Miyajima***Department of Psychiatry and Behavioral Sciences, Tokyo Medical and Dental University, Japan*

COVID-19 caused the collapse of medical systems in metropolitan areas around the world. Under such circumstances, medical personnel are at high risk of mental health problems. Furthermore, they are also susceptible to deterioration of interpersonal relationships due to fear of contagion and stigma which prevail among the public. To maintain the medical system, preserving mental health as well as motivation of medical personnel are critical. Lack of appropriate psychological intervention for hospital staff can lead to not only mental illness but also voluntary absenteeism which could result in a collapse of medical systems. To date, there is no tool to comprehensively assess these mental and social factors that have potential impacts on the mental health and motivation of medical personnel during the COVID-19 pandemic. The purpose of this study is to develop a new scale termed Tokyo Metropolitan Distress Scale for Pandemic (TMDP), which can concisely evaluate pandemic-related mental health and social factors, consisting of nine items.

To this end, we analyzed the data from a questionnaire to survey the mental health of medical personnel at the Tokyo Medical and Dental University Hospital in April 2020, immediately after the onset of the COVID-19 pandemic in Tokyo, Japan. In total, 260 doctors, nurses, medical assistants and related medical staff members were evaluated by Patient Health Questionnaire-9 (PHQ-9) for depression, Generalized Anxiety Disorder-7 (GAD-7) for anxiety, Perceived Stress Scale-10 (PSS-10) for the perception of stress, and TMDP. TMDP consists of 9 items which focus on: (1) fear of COVID-19 infection of oneself or transmission of it to others, (2) safety of the work environment, (3) deterioration of human relationships due to COVID-19, and (4) financial burden associated with COVID-19. These items were listed based on the pilot interviews of medical personnel in the same hospital. Factor analysis and convergent validity analysis were conducted to verify TMDP. Assessments by areas under receiver operating characteristic curves (AUC) of TMDP against depression and anxiety were also conducted.

Factor analysis revealed 2 factors; concerns for infection and social stress. These factors were correlated with the scores of PHQ-9, GAD-7, and PSS-10. The AUC of TMDP for either depressive state or anxiety was 0.90 (95%CI, 0.80 -0.94), which indicated an excellent performance of TMDP for detecting both moderate/severe depression and anxiety. A recommended cut-off score was 14. In addition to detecting depressive state and anxiety, the TMDP features other advantages, such as the inclusion of social stress factors, which are related to enthusiasm to work. It should also be noted that before an interview, detection of these problems using the TMDP enabled us to considerably reduce interview time and to detect overlooked negative social factors which may diminish enthusiasm towards work of medical personnel.

It is reportedly important for medical personnel to feel that hospital organizations and public administrations protect them from infections, social stigma, and financial burden, which would represent effective factors to increase their motivation and reduce their hesitation to work. Therefore, comprehensively understanding the situation of medical personnel with the TMDP and intervening at an early stage will lead to prevention of turnover and absenteeism due to decreased motivation for work.

In summary, the proposed TMDP scale can critically and quickly evaluate social factors as well as psychological distress that could affect mental well-being and motivation of medical staff under pandemic circumstances. This scale would make a great contribution to psychological support for health-care workers under COVID-19 pandemic. Further long-term analysis will be necessary to show the usefulness of the TMDP for early intervention to maintain the overall well-being and prevention of turnover and absenteeism of medical personnel.

Reference

Shiwaku H, Doi S, Miyajima M et al., Novel brief screening scale, Tokyo Metropolitan Distress Scale for Pandemic (TMDP), for assessing mental and social stress of medical personnel in COVID-19 pandemic. *Psychiatry Clin Neurosci*. DOI: 10.1111/pcn.13168, 2020.

SM01-03 | Psychological interventions for COVID-19-affected people: Lessons learned from confirmed cases and cohort isolation in South Korea

So Hee Lee

Department of Psychiatry, National Medical Center, Korea

The Korean government classifies COVID-19 cases by severity to prioritize hospital-based treatment of more severe cases, while mild cases receive medical treatment and monitoring at residential treatment centers. The National Medical Center is one of the major nationally designated infectious disease hospitals, and the psychiatric team has developed a system to identify COVID-19 patients early and provide proper interventions for comorbid mental health problems, reflecting their experience with MERS patients in 2015. First, if patients are eligible, the team administers psychological tests on the first day of admission to screen the patients' mental health using simple self-report questionnaires. The assigned psychiatric residents or psychiatrists make daily telephone calls to patients who meet the criteria for intervention to check on each patient's mental condition. Furthermore, whenever necessary, the team conducts face-to-face interviews, although the team tries to communicate with patients by phone calls, if possible. The criterion for interventions is any of the following: current use of psychiatric medication, current reports of any psychiatric complaints during hospitalization, past psychiatric history, and risk group based on the results of psychological tests.

A review of medical records revealed that 25.2% of the COVID-19 patients were in acute treatment phases, having experienced psychiatric symptoms, and were diagnosed with psychiatric disorders; over 80% of the diagnosed patients were prescribed psychotropic drugs during treatment for COVID-19. This means that about 1/4 of all COVID-19 patients needed active psychiatric interventions during the acute treatment phase in quarantine hospitals. Psychological tests were administered to 55.4% of COVID-19 patients; the rest were excluded from psychological testing due to medical or psychiatric conditions. The result of psychological tests demonstrated that, at a few days following admission, 16.0% of the subjects were positive on the depression scale, 11.1% were positive on the PTSD scale, and 6.8% had suicidal ideation; overall, 25.2% of subjects exhibited one or more condition. These findings indicated that of COVID-19 patients in acute wards who had participated in screening psychological tests, about one-fourth were in need of psychiatric attention and care.

We felt that the self-report psychological tests on admission were very useful in monitoring the mental health status of COVID-19 patients on isolation wards. Some patients suffered from psychiatric symptoms later, after admission, although their physical condition had improved. Overall, we observed that treatment on isolation wards could precipitate new psychiatric symptoms or aggravate existing mental health problems. These findings are similar to those of previous studies among patients hospitalized for acute SARS or MERS illness. Moreover, the COVID-19 outbreak inevitably affected many of those patients who had chronic psychotic disorders or dementia and needed active management by psychiatrists. These results supported

the need for intervention by mental health professionals for patients admitted to EIDs treatment hospitals.

When confirmed cases were identified among patients in mental hospitals, to prevent the spread of COVID-19, cohort isolation was adopted. These isolated patients and staff have been exposed to a variety of new and unpredictable events and have experienced various feelings in response to this critical situation. Individual interviews were conducted with a total of 11 healthcare workers who experienced cohort isolation in a mental hospital, including a psychiatrist, nurses, and nurses' aides. Qualitative data analysis using the consensual qualitative research approach revealed four main domains of difficulty: (1) hardships related to cohort isolation, (2) struggles specific to mental hospitals, (3) difficulties originating from outside the hospital, and (4) positive effects.

The COVID-19 pandemic crisis has significant impact in health care system, and healthcare workers for mental hospitals have confronted serious challenges in their work. There is a need for a collective effort to provide all the support such as human resources or reward for healthcare workers in isolated mental hospitals. In addition, the Korean government must develop proper treatment system, in response to the outbreak of confirmed cases among severely mentally ill patients.

SM01-04 | Clinical outcomes in COVID-19 patients with severe mental illness: A comparison between community-acquired and outbreak at sanatorium

Sanghoon Lee

Department of Neuropsychiatry, National Center for Mental Health, Korea

Underlying diseases- diabetes, cardiovascular disease, asthma, obesity, and smoking are well known for the risk factors of clinical outcomes in COVID-19. The patients with severe mental illness (SMI) have more cardiovascular disease, diabetes, pulmonary disease, smoking, and obesity than common population. So, patients with SMI were concerned as vulnerable group for COVID-19. Recent research reported higher rate of infection and death rate of patients with SMI from COVID-19 compared to general population, even after other factors, including underlying diseases, were adjusted.

In 2020, COVID-19 outbreak at mental hospital and sanatorium was one of the main issues in Korea, because of their high prevalence and poor environment. Korean government announced new guideline to improve the environment of mental hospital and sanatorium. We need to address the environment of mental health care in view of infection among physical health care.

So, we looked into the data of 543 patients with SMI who were admitted to the National mental hospitals for COVID-19 and analyzed their clinical outcomes depending on two groups: community-acquired or outbreak at hospital and sanatorium.

Symposium 2

Interface between physical and mental disorders: Clinical and research implications

SM02-01 | Cardiac outcomes of depression treatment in patients with acute coronary syndrome

Jae-Min Kim

Department of Psychiatry, Chonnam National University Hospital, Korea

Depression is common after acute coronary syndrome (ACS) with adverse effects on course and prognosis. Despite the clinical importance, there has been a heated debate on the utility of depression screening and treatment in clinical practice for ACS, since it has been unclear whether this procedure actually improves cardiac outcome. To address this, we recruited and categorised participants by depression screening and diagnosis status at baseline and 24 week treatment allocation into five groups: 651 screen-negative, 55 screen-positive but not fulfilling depressive disorder diagnostic criteria, 149 randomised to escitalopram, 151 randomised to placebo, and 146 not randomised and receiving medical treatment only (MTO). We then followed these cohorts for 5~12 years to investigate the impacts of depression screening, diagnosis, and treatment on major adverse cardiac event (MACE).

Principal findings were that screening positive for depression was associated with a higher hazard of MACE, even in the cases without diagnostic criteria for depressive disorder; that escitalopram treatment was associated with significantly better outcomes than placebo and MTO in patients with depressive disorder following ACS; and that MTO was associated with worse cardiac outcomes even compared to placebo, despite milder depressive symptoms at baseline.

Our findings, we believe, provide support for routine depression screening and diagnostic assessment following ACS and the recommendation of appropriate treatment in those found to have depressive disorder, which could improve long-term cardiac outcomes. To our knowledge, this study is the longest and most extensive evaluations of its kind. We believe our findings are novel and a significant and original contribution not only for specialists in Cardiology or Psychiatry but also for general physicians.

SM02-02 | Health inequalities faced by people with psychotic and affective disorders

Robert Stewart

Department of Psychological Medicine, King's College London, UK

Higher premature mortality and reduced life expectancy have been recognised in people with a range of mental disorders for far too long now and there is no sign that the gap is narrowing; indeed, it may be

widening in some groups. Much of the difference appears to lie in improvements in mortality in the general population which are not being experienced by those with mental disorders. Although suicide is a concerning contribution to premature mortality, most of the inequality lies in natural causes of death, although spread out across a wide range of different underlying conditions, and by no means confined to cardiovascular disease where most investigation has focused. Contributing factors to inequalities are many and varied - from adverse lifestyle factors such as smoking, inactivity and poor diet, to increased risk of disorders such as obesity, diabetes and hypertension. It is also important not to forget the potential role of suboptimal management of health conditions, whether this lies in difficulties accessing care or experiences of discrimination and less adequate treatment. It is becoming reasonable to assume that investigation and/or treatment receipt will be unequal unless proved otherwise, because this can be demonstrated in very large numbers of scenarios. There is a pressing need for better characterisation of points of inequality and modelling their potential impact on later morbidity, so that public mental health improvement interventions can be most efficiently targeted. The growing network of linked data from different healthcare sectors offers important opportunities in this respect.

SM02-03 | Psychiatric comorbidity and stroke outcomes in stroke patients

Hee-Ju Kang

Department of Psychiatry, Chonnam National University Hospital, Korea

Stroke is the leading cause of disability and death. The main treatment goal of stroke management is to improve long-term outcome by reducing the likelihood of stroke recurrence, other cardiovascular events and mortality. Accordingly, considerable efforts has been made to predict the long-term risk in stroke patients. With facing a sudden life-threatening experience and life-long disabilities, stroke patients commonly experienced psychiatric comorbidity such as depression, suicide and anxiety. These psychiatric comorbidity has been found to affect functional outcomes at acute and chronic phase within 1 year after stroke. However, the impact of psychiatric comorbidity on the long-term stroke outcomes has not been fully elucidated. Therefore, we investigated whether psychiatric comorbidity were associated with long-term stroke outcomes after 8-14 years stroke and their interaction with biomarkers. A total of 278 patients were evaluated to determine psychiatric comorbidity (depressive status using Mini International Neuropsychiatric Interview (MINI) at both 2 weeks and 1 year after index stroke and suicidal ideation using the suicidal thought item of the Montgomery–Asberg Depression Rating Scale (MADRS) at 2 weeks after stroke) and were followed 8-14 years later in order to evaluate long-term cerebro-cardiovascular events (CCVEs) encompassing stroke recurrence, myocardial infarction and vascular death. Blood biological markers were evaluated at 2 weeks after stroke. Kaplan -Meier event rates for outcomes were calculated, and hazard ratios were estimated using Cox regression models after

adjusting for a range of covariates. For depressive status, the composite CCVEs incidence was higher in patients with depressive disorders at 2 weeks and 1 year than in those without. The major depressive disorder group was at higher risk of CCVEs than the other groups at both evaluation points. Composite event incidence was highest in patients with depressive disorder during both the acute and chronic phases. For suicidal ideation (SI), SI within 2 weeks of stroke predicted worse long-term outcomes, independent of covariates. SLC6A4 hypermethylation also was associated with worse long-term outcomes in stroke patients. A significant interaction effect of SI and the methylation status of CpG 4 on long-term stroke outcomes was also identified. Presence of depression and suicidal ideation at 2 weeks after stroke results in significantly higher risk of occurrence of CCVEs during 8-14 years after stroke. Hypermethylation of serotonin transporter gene also predicted worse stroke outcomes during 8-14 years after stroke and hypermethylation status interacts with suicidal ideation on long-term stroke outcomes. More careful evaluation and intensive management are indicated for those at high risk of worse long-term outcomes in stroke patients.

SM02-04 | Impact of COVID-19 and hospitalization on depressed mood, anxiety, insomnia, and suicidal idea

Ju Wan Kim

Department of Psychiatry, Chonnam National University Hospital, Korea

The COVID-19 is overwhelming health care systems globally. Hospital isolation may generate considerable psychological stress. The spectrum of COVID-19 symptom ranges from asymptomatic to critical; most infections are not severe. The association between COVID-19 symptoms and psychological symptoms has not been systematically studied. It is widely known that treatment is more difficult when physical diseases and mental problems are combined. Evidence-based interventions targeted at COVID-19 patients are scarce. Here, we investigated the effects of telephonic intervention on the relationship between psychological symptoms and COVID-19 symptoms at hospitalization and after 1 week. For the assessment of anxiety and depressive symptoms, the Hospital Anxiety and Depression Scale was administered to patients once a week. Insomnia severity index and Beck Depression Inventory 9 item were checked weekly to assess insomnia and suicide idea. Of 461 enrolled, clinically meaningful psychological symptoms were found in 75 (16.3%) patients for anxiety; 122 (26.5%) for depression; 154 (33.4%) for insomnia; and 54 (11.7%) for suicidal ideation. Commonly reported COVID-19 symptoms are cough/sputum/sneezing (244, 52.9%), headache/dizziness (98, 21.3%), myalgia (113, 24.5%), and sorethroat (89, 19.3%). Psychological symptom group (N = 235, 50.1%) were more likely to be female, jobless, COVID-19 symptoms, headache/dizziness, sorethroat, previous psychiatry history, and have a diagnosis of previous endocrine disease. The associations between COVID-19 symptoms during the admission and changes in the HADS (A), HADS (D), ISI scores over 1 week in the 322 participants who

completed the follow-up evaluation are displayed in table and Figure. Principal findings of this study in patients with COVID-19 were that psychological symptoms were associated with female, unemployment status, previous psychiatric history and rheumatic disease, headache/dizziness, sorethroat, and presence of COVID-19 symptoms. Moreover, presence of COVID-19 symptoms had a significant and persistent negative impact on anxiety and depression at admission and 1 week after hospitalization. Early intervention is essential to improve the outcomes of patients with mental illness. It is necessary to understand not only the treatment of the COVID-19 but also the psychosocial effects. During the COVID-19 outbreak, patients isolated in hospitals manifest risk factors for, and symptoms of, psychosocial problems. Therefore, various intervention strategies are recommended to manage psychological problems in these patients.

Symposium 3

New perspectives of panic disorder: With latest understandings and tools

SM03-01 | The extended fear network in panic disorder

Chien-Han Lai

Institute of Biophotonics, National Yang-Ming University, Taiwan

The core concept for pathophysiology in panic disorder (PD) is the fear network model (FNM). The alterations in FNM might be linked with disturbances in the autonomic nervous system (ANS), which is a common phenomenon in PD. The traditional FNM included the frontal and limbic regions, which were dysregulated in the feedback mechanism for cognitive control of frontal lobe over the primitive response of limbic system. The exaggerated responses of limbic system are also associated with dysregulation in the neurotransmitter system. The neuroimaging studies also corresponded to FNM concept. However, more extended areas of FNM have been discovered in recent imaging studies, such as sensory regions of occipital, parietal cortex and temporal cortex and insula. The insula might integrate the filtered sensory information via thalamus from the visuospatial and other sensory modalities related to occipital, parietal and temporal lobes. In this talk, the traditional and extended FNM would be discussed. I would also focus on the current evidences of insula, temporal, parietal and occipital lobes in the pathophysiology. In addition, the white matter and functional connectome studies also support the concept of extended FNM. An emerging dysregulation model of fronto-limbic-insula and temporooccipito-parietal areas might be revealed according to the combined results of recent neuroimaging studies. Recently several randomized controlled trials of treatment modalities in PD also revealed that the crucial roles of the extended fear network model. The future delineation of extended FNM model can be beneficial from more extensive and advanced studies focusing on the additional sensory regions of occipital, parietal and temporal cortex to confirm the role of extended FNM in the pathophysiology of PD.

Keywords: Fear network model; Fronto-limbic; Insula; Panic disorder; Temporo-occipito-parietal cortex.

SM03-02 | Neural correlates of early trauma in panic disorder

Min-Kyoung Kim

Department of Psychiatry, CHA University, Korea

Various kinds of early trauma appear to influence some characteristics such as age at onset, symptom severities, personality traits, and poor treatment response in patients with panic disorder (PD). Negative effects of early trauma have ongoing impacts that can last a lifetime in individuals with PD. A previous study showed that early physical trauma is related to the symptom severity of PD. Another study demonstrated that an association between early sexual trauma and personal vulnerability traits, such as neuroticism, and poor long-term treatment outcomes in individuals with PD.

Furthermore, neuroanatomically, early trauma exposure is suggested to confer a greater risk for the development of PD by altering neurodevelopmental processes. A body of studies have shown that white matter microstructures, particularly in the fronto-limbic and callosal regions, could be affected by a history of early trauma in patients with PD. In this lecture, we will discuss the latest findings on neural correlates of early trauma in PD.

SM03-03 | Chatbot and VR-based cognitive behavioral treatment for panic disorder

Jooyoung Oh

Department of Psychiatry, Gangnam Severance Hospital, Korea

Cognitive behavioral therapy (CBT) is a well-established treatment for panic disorder, but many fewer patients receive this treatment compared to medication-based therapy. Mobile app-based interactive CBT using a chatbot, or virtual reality (VR)-based training and exposure treatment can increase patient access to CBT. In this background, a chatbot for panic disorder ("Todaki") and a VR-based CBT program for panic disorder ("Relieve") were developed. Treatment effect and usability of these new therapeutic tools were examined. As the results, both the chatbot and VR-based CBT showed significant effects in reducing the severity of panic disorder, which was assessed by panic disorder severity scale (PDSS), and the usability was also not inferior to the existing treatment methods. In particular, VR-based CBT showed the effect of correcting the balance of the autonomic nervous system, which was found through the serial frequency domain analysis of heart rate variability. These preliminary investigations suggest that as mobile devices, VR and artificial intelligence techniques advance, chatbot and VR can be utilized as easily accessible, inexpensive, and effective tools for managing panic symptoms. Ultimately, these chatbot and VR services will enable patients with panic symptoms to obtain reliable information, real-time symptom

management, and cognitive behavioral therapeutic aspects including exposure treatment that have not thus far been fully implemented due to constraints of time, space, and cost.

SM03-04 | Machine learning-based discrimination of anxiety disorder and panic disorder

Seo-Eun Cho

Department of Psychiatry, Gachon University Gil Medical Center, Korea

Backgrounds: Panic disorder is a highly prevalent psychiatric disorder that substantially impairs quality of life and psychosocial function. Panic disorder arises from neurobiological substrates and developmental factors that distinguish it from other anxiety disorders. Differential diagnosis between panic disorder and other anxiety disorders has only been conducted in terms of a phenomenological spectrum.

Methods: Through a machine learning-based approach with heart rate variability (HRV) as input, we aimed to build algorithms that can differentiate panic disorder from other anxiety disorders. Five algorithms were used: random forest (RF), gradient boosting machine (GBM), support vector machine (SVM), artificial neural network (ANN), and regularized logistic regression (LR). 10-fold cross-validation with five repeats was used to build the final models.

Results: A total of 60 patients with panic disorder and 61 patients with other anxiety disorders (aged between 20 and 65 years) were recruited. The L1-regularized LR showed the best accuracy (0.784), followed by ANN (0.730), SVM (0.730), GBM (0.676), and finally RF (0.649). LR also had good performance in other measures, such as F1-score (0.790), specificity (0.737), sensitivity (0.833), and Matthews correlation coefficient (0.572).

Conclusion: This study demonstrated that HRV can be used to differentiate panic disorder from other anxiety disorders. Future studies with larger sample sizes and longitudinal design are required to replicate the diagnostic utility of HRV in a machine learning approach.

Symposium 4

State-of-the-art of psychotic disorders

SM04-01 | Cerebral glutamate levels in people at high-risk of psychosis: A preliminary result

Tae Young Lee

Department of Psychiatry, Pusan National University Yangsan Hospital, Korea

Individuals at clinical high risk (CHR) are a unique population enriched for precursors of major psychiatric disorders, especially schizophrenia (SCZ). Recent neuroimaging findings point to abnormalities in glutamate level of patients with SCZ, including chronic and early course patients, as well as in CHR individuals relative to healthy comparison groups, thus suggesting that alterations of glutamate are present even

before illness onset. There is, however, still a lack of in vivo evidence of glutamate thalamic abnormalities in the CHR state. Therefore, in this pilot study, we investigated whether changes in glutamate in the anterior insular of high-risk groups are observed even before onset.

SM04-02 | Make the unknown known: Applying radiomics in identifying schizophrenia

Minji Bang

Department of Psychiatry, CHA Bundang Medical Center, Korea

Radiomics is a new, advanced analytic technique that quantifies and extracts high-dimensional imaging features to aid clinical decision-making using medical image-based biomarkers. Radiomics aims to discover meaningful “hidden” information within radiological images, which is inaccessible with single-value approaches. Radiomics has a wide potential as a diagnostic and prognostic biomarker in brain tumors as well as neurodegenerative diseases, such as Alzheimer’s and Parkinson’s disease. However, the application of radiomics is still in its infancy in the field of psychiatry.

Recently, we investigated whether radiomic features extracted from T1-weighted structural magnetic resonance imaging (MRI) of hippocampal subfields can differentiate patients with schizophrenia from healthy controls (HCs). Thirty radiomic features were identified from hippocampal subfields to differentiate participants with schizophrenia from HCs. In the training set, the area under the curve (AUC) exhibited poor to good performance (range: 0.683 -0.861). The best performing radiomics model in the test set was achieved by the mutual information feature selection and logistic regression with an AUC, accuracy, sensitivity, and specificity of 0.821 (95% confidence interval 0.681 -0.961), 82.1%, 76.9%, and 70%, respectively.

In the second study, we tested a multiparametric radiomics model focusing on the corpus callosum (CC) for the diagnosis of schizophrenia. The radiomics model with the highest performance showed an area under the curve, accuracy, sensitivity, and specificity of 0.89 (95% confidence interval: 0.81 -0.98), 80.0%, 83.3%, and 76.9%, respectively, in the test set.

Taken together, the radiomics model shows its robustness for the diagnosis of schizophrenia. Radiomic features could be a potential source of biomarkers that support the objective diagnosis of schizophrenia and improve the understanding of its neurobiology.

SM04-03 | Psychosis MRI research in Japan

Naohiro Okada

International Research Center for Neurointelligence, The University of Tokyo, Japan

Approximately 35 years have passed since MRI research for schizophrenia was started to explore the neuropathology of schizophrenia. So far, there have been a number of schizophrenia research articles

using MRI technique, while the results are sometimes mixed. To acquire robust findings, the identification of neurobiological pathology has been recently challenged using large-scale cross-sectional datasets. In addition, as the early intervention for psychosis including schizophrenia improves patients' outcomes, biological mechanisms of first episode schizophrenia [FES] and at-risk mental state [ARMS] have recently been reported using MRI. However, at this moment, neurobiological pathology underlying clinical symptoms is not considered when a schizophrenia diagnosis is made. In other words, to the best of my knowledge, no MRI biomarkers have been practically applied in psychiatric clinical settings until now. This is at least partly because effect sizes for most MRI indicators between diseases and controls are relatively small.

In this symposium, I will talk about how MRI research for psychosis has been conducted in Japan until now. In addition, I will talk about our recent international collaboration.

The neural basis of not only chronic schizophrenia but also FES and ARMS has been investigated using MRI. Some MRI psychosis studies were conducted using multi-site large-scale data analysis. In addition, we have been longitudinally collecting MRI data of adolescent general population, because adolescence is a crucial stage of psychological development and is critically vulnerable to the onset of psychopathology including psychosis. As for international collaboration, we have recently been working with foreign institutions including Korea.

Finally, I would like to discuss the future direction of our MRI research to deepen the understandings of the neuropathology of psychosis as well as to facilitate an MRI clinical application for psychosis.

SM04-04 | Annual prevalence, incidence and treatment response of schizophrenia and similar psychotic disorders in Republic of Korea: A big data based study

Sung Joon Cho

Department of Psychiatry, Kangbuk Samsung Hospital, Korea

Psychosis, including schizophrenia and similar psychotic disorders, is representative of severe mental illness and is not uncommon. It places a huge economic burden on both patients and their families. We analyzed the South Korean database of Health Insurance Review and Assessment Service (HIRA), which contain the health utilization data of all Korean nationals to estimate the incidence and prevalence of schizophrenia. We conducted this study to address the incidence and prevalence of schizophrenia and similar psychosis in Korea with nation-wide health insurance data.

The annual prevalence and incidence of schizophrenia and similar disorders (SSP) between 2010 and 2015 in Korea were calculated from the Health Insurance Review and Assessment Service (HIRA) database, which includes diagnostic information of nearly all Korean nationals.

The 12-month prevalence of SSP in the Republic of Korea between 2010 and 2015 were 0.48 and 0.66%. The 12-month prevalence of schizophrenia were 0.40 and 0.52%, respectively; The annual incidence rates (IR) of SSP between 2010 and 2015 were 118.8 and

148.7 per 100,000 person-year (PY), respectively. For schizophrenia, IR per 100,000 PY were 77.6 in 2010 and 88.5 in 2015.

Symposium 5

WPA-PRCP symposium on late life depression

SM05-01 | Chaos and balance: Depression recurrence and network instability in late-life

Carmen Andreescu

Department of Psychiatry, University of Pittsburgh, United States

In this session we discuss a model that considers recurrence as a consequence of allostatic load and homeostatic disequilibrium. We propose that depressive episodes be considered within the concept of neural homeostasis, or the tendency of neural circuits and networks to develop a stable equilibrium. In individuals at low risk for depression, exposure to stressful events and high levels of perceived stress will result in an allostatic response. This allostatic response is characterized by neural changes in network function and connectivity and physiological changes in the HPA axis, autonomic nervous system, immune system and circadian rhythm. In turn, these allostatic physiological responses contribute to short- or long-term behavioral and mood changes that include fluctuations in affective and anxiety symptoms and sleep disruption that precede depression recurrence.

We will review the studies examining fMRI predictors of recurrence in MDD, with a focus on the canonical brain networks - default mode, salience and executive control network. As these networks involved in emotion reactivity and regulation are also implicated in mediating the response to stress, we will frame the results in the context of allostasis and stress-related increased in allostatic load. Finally, we will present data showing instability in the canonical brain networks in depression non-responders and will discuss the implications for future identification of biomarkers of late-life depression recurrence.

Keywords: homeostatic disequilibrium, neural networks instability, recurrence risk

SM05-02 | Association between lifestyle modification and late life depression

Sang Joon Son

Department of Psychiatry, Ajou University School of Medicine, Korea

- Resilience was significantly associated with a range of mental health constructs in the elderly with depression
- Enhancing stress-protective factors are associated with the regulation of neural circuits that modulate reward and motivation, thereby result in improved adaptation to stress related late life depression
- Behavioral training targeting lifestyle modification in terms of resilience improvement is likely to reduce depressive symptoms in the elderly

SM05-03 | Predicting treatment response in late-life depression**Helmet Karim***Department of Psychiatry and bioengineering, University of Pittsburgh, United States*

In this session, we will review the predictors of treatment response in late-life depression (LLD). Late-life depression is a highly heterogeneous disorder as there is evidence of varying pathological markers that are likely to contribute to LLD. Treatment of LLD is equally complex, often requiring multiple regimens before identifying an effective regimen. This process is associated with increased suicide risk, worsen comorbidities, greater disability, cognitive impairment, and death. Identifying markers of treatment response would help personalize treatments in LLD. Machine learning can help both identify neural markers of response and potentially utilize imaging to make treatment decisions. We will start with an overview of pre-treatment structural and functional neural markers, as measured by magnetic resonance imaging (MRI), that have been associated with treatment response. We then review results from a LLD neuroimaging study that used pharmacological fMRI to identify pre-treatment as well as acute changes in neural activity that predict response. We then review results of a machine learning algorithm developed based on this data to predict response. We end by reviewing new imaging findings, potential neural biomarkers, and future directions.

SM05-04 | Default mode network dissociation linking cerebral beta amyloid retention and depression in cognitively normal older adults**Sheng Min Wang***Department of Psychiatry, the Catholic University of Korea, Yeouido St. Mary's Hospital, Korea*

To date, cerebral beta amyloid (A β) deposition and late-life depression (LLD) are known to be associated with trajectory of Alzheimer's disease (AD). However, their neurobiological link is not clear. Previous studies showed aberrant functional connectivity (FC) change of default mode network (DMN) in early A β deposition and LLD, but its mediating role is not elucidated. Thus, we aimed to investigate distinctive association pattern of DMN FC linking LLD and A β retention in cognitively normal older adults. Two hundred thirty-five cognitively normal older adults with (N=118) and without depression (N=117) underwent resting state functional magnetic resonance image and 18F-Flutemetamol positron emission tomography. We investigated associations among A β burden, depression, and DMN FC. Independent component analysis showed increased anterior DMN FC and decreased posterior DMN FC in depression group compared with no depression group. Global cerebral A β retention correlated positively with anterior and negatively with posterior DMN FC. Anterior DMN FCs were positively correlated with depression severity whereas posterior DMN FCs were negatively correlated with cognitive function. In

addition, effect of global cerebral A β retention on depression severity was mediated by subgenual anterior cingulate FC. Our results of anterior and posterior DMN FC dissociation pattern might play pivotal role in linking cerebral A β pathology and LLD in the course of AD progression. Further longitudinal studies would be needed to confirm causal relationships between cerebral A β retention and LLD.

SM05-05 | Late life depression in countries in Zone 16 of WPA: Focus on Thailand**Pongsatorn Paholpak***Department of Psychiatry, Khon Kaen University, Thailand*

Depression in late life is common and frequently under-diagnosed. According to the WHO, prevalence of both depressive and anxiety disorders in Asia are very high and disabling when compared to other regions. Among countries in South-East Asia (SEA), the prevalence of late life depressive disorders varied widely from 3.7 - 23.7% (India 21.9%, Indonesia 12.8 - 15.8 %, Singapore 3.7%, and Thai 23.7%). Depressive disorders in late life have been associated with cardiovascular diseases and poor long-term outcomes. Predictors of late life depression in SEA community may include financial dependency and education levels.

Manifestations of late life depression were varied widely. In SEA, depressive symptoms in elderly usually present with anxiety (72%) and somatic symptoms (98%). A screening tool which quantifies only depressive symptoms, such as Geriatric Depression Scale (GDS), may not be able to capture all symptoms of depressive syndrome in SEA population. Therefore, screening for late-life depression usually requires more tools to ask about anxiety and somatic symptoms.

The most recent study on prevalence of late-life depressive disorders in Thailand indicated that the prevalence was 23.7% with a rate of suicidal risk of 20.4%. Levels of perceived stress, perceived social support, and neuroticism were different between clinically depressed elderly and non-depressed elderly. Scores from screening cognitive test (Montreal Cognitive Assessment Test: MOCA) were not different between groups. During the current COVID-19 pandemic situation, it is possible that the prevalence will be slightly increased due to many risk factors, including loneliness from lockdown. As social isolation is strongly linked to depression, anxiety, cognitive decline and reduced resilience. Depressive disorders in Thai elderly were frequently treated with polypharmacy (>2 medications) especially when there was anxiety as comorbidity. Other medical comorbidities were also significant predictors too. Other studies also indicated that antipsychotics and benzodiazepine were prescribed in about a third and a half of the Asian elderly population who received antidepressants for their depressive disorders, respectively. According to our experiences, in both Northeastern and Southern parts of Thailand, majority of cases with late life depression were managed medically. However, a small number of patients, about 5 - 10 cases a year, with severe symptoms which were not responsive to antidepressants, required electroconvulsive therapy (ECT). Most of these hospitalized cases presented with various degrees of nihilistic delusion (delusion of non-

functioning) and severe psychomotor retardation. After a full course of ECT, some of these cases required maintenance ECT (mECT) as an adjunctive therapy in a long-term.

Knowledge gaps in many aspects of late life depression remain. More research about late life depression in the countries of zone 16 is needed to help us for a better understanding about screening, managing, and prevention of this condition.

Symposium 6

Development of peer supporter activities

SM06-01 | Creating a world of difference: Service user-led education for future psychiatrists in New Zealand

Susanna Every-Palmer; Tracey Gardiner; Rachel Tester, Sarah Gordon
University of Otago, Wellington, New Zealand

Background: While the role of service users in co-producing mental health services has become well established (albeit variably implemented), the equivalent practice of co-producing psychiatric education, in which service users are involved in the design and delivery of teaching to future psychiatrists, remains in its infancy. Service users often identify mental health staff and systems as stigmatising, irrespective of intention. The Commission on the Future of Psychiatry considers service user educators to be ‘particularly important to teach the principles of recovery-oriented care and combat negative stereotypes’, but the profession has been slow in adopting this practice.

Aim: Funded through the New Zealand Health Promotion Agency, a new service user education and research group called World of Difference at the University of Otago, has been supported to develop, deliver and evaluate a comprehensive education programme for medical students and psychiatry residents. Its aim is to counter discrimination associated with mental distress.

Methods: Following the implementation of the program, data have been analysed using standard quantitative and qualitative approaches. In line with co-production principles, the teaching, data collection, and analysis were managed by service users.

Results: Psychiatric residents found service user-led training challenging but valued it highly. It changed their thinking about the human rights of those they treat. Data collected from medical students showed decreases in stigma scores and improved knowledge of recovery compared with control students who had not experienced this teaching.

Conclusion: Service user led education of this type makes a significant contribution to reducing existing exclusion of mental health services users from equitable access to, and benefit from, all aspects of health care.

SM06-02 | Peer supporter activities in Korea 2021

Boung Chul Lee

Department of Psychiatry, Hangang Sacred Heart Hospital, Korea

Korean peer supporter system was made spontaneously with the various needs of several organizations. The bottom-up system had various purposes and movements. In Korea, the first peer supporter in psychiatry was employed in 2014. As the rights of psychiatric patients get more and more attention, the need and expectation of peer support system increased. In 2019, Law for protection and rehabilitation support for people with severe mental illness has been made. And 2020, a structured educational course was made to raise qualified supporters. However, there are no health insurance items to cover these supports within medical areas. Korea is about to facilitate and collaborate peer support systems in psychiatry.

SM06-03 | Building Peer Support towards Vocational Recovery - 5 Years Experiences in Taiwan

Su-Ting Hsu

Department of Community Psychiatry, Kaohsiung Municipal Kai-Syuan Psychiatric Hospital, Taiwan

There have been at least 3 waves of evolution of peer support in the field of psychiatric services in Western culture; from self-help groups, consumer providers, and peer, and peer-led or consumer-run services. Development of peer support services is thought to be critical in the recovery movement. Peer services are far less common in the Chinese culture, however. In the first session of this presentation, historical contexts and obstacles of developing peer services in Taiwan will be reviewed. The obstacles include medicalization of psychiatric conditions, and stigma.

Without the foundation of peer services, we have deliberated to choose a common yet challenging goal, sustaining employment, as a way of connecting people with psychiatric disabilities since 2016. People met and interacted in social media (LINE and Facebook) and in-person groups. Some issues are as ordinary as “normal people” would have in groups, such as interpersonal conflicts and sibling-rivaling. Some issues are pertained to psychiatric conditions, such as suicidal threat and fear. The five years experiences, including challenges and gains, in developing peer support towards vocational recovery will be presented in the later part of presentation. In the long run, emotional support, informational support, and appraisal support have been freely exchanged in our peers.

Our reflections on peers' pathway towards vocational recovery will be shared in the last part of presentation. Role models present

hope. The concept of recovery and competency to manage life and work difficulties of role models are particularly important. "Supported peering" should be implemented to facilitate positive impact of self-help groups. "Together, stronger." Luckily, we are able to maintain a vocational focus in our peer support group, and are heading for our next milestone- to advocate reasonable accommodation loudly.

Keywords: peer support, vocational recovery, social media, self-help group, advocacy

SM06-04 | Revolutionary progress in Japan: Health insurance coverage for peer supporter activities

Tsuyoshi Akiyama

Department of Neuropsychiatry, NTT Medical Center Tokyo, Japan

Introduction: Peer supporters can complement professional staff in encouragement for people with mental illness to be independent. In the past, the opportunities for paid service by peer supporters were limited in Japan. However, after four years of research, the Japanese government approved systematic peer supporter training and starts paying for care by the trained peer supporters in April 2021.

Objective: The objective of this presentation is to report the revolutionary progress of health insurance coverage for peer supporter activities in Japan.

Methods: Our research group created basic, advanced, and follow-up training courses for peer supporters. Knowledge questions, Burn-out scale, and Mor Barak inclusion/exclusion scale were examined pre- and post-basic and advanced training courses and at a time of follow-up course.

Results: The effectiveness of the training course was proven. Based on this result, the Japanese government agreed to pay for the service provided by peer supporters at welfare facilities.

Conclusions: This is an unprecedented development to financially support the service provided by peer supporters in Japan.

Symposium 7

Applications of Acceptance and Commitment Therapy (ACT) in Korea: Focusing on the ACT matrix

SM07-01 | Acceptance and Commitment Therapy (ACT) and the ACT matrix

Kevin Polk

SM07-02 | Mindfulness on the ACT matrix: Mindfulness without mindfulness

Hwa-Young Lee

Department of Psychiatry, Soonchunhyang University Cheonan Hospital, Korea

Essentially all meditation and mindfulness traditions have in some way or another embraced the practice of letting go of words or the results of words. So mindfulness traditions provide suggestions along the lines of "Notice the words go floating by." That "floating by" quality speaks to letting go of the effects of words. Training in contact with the present moment is usually the starting point for mindfulness practice. For example, many of the definitions speak about mindfulness as a method of directing one's attention to the present, as in "the self-regulation of attention" (Bishop), "paying attention in a particular way..." (Kabat-Zinn), and "actively engaged in the present" (Langer). These definitions refer to present moment awareness primarily in language that is used to teach meditation practices. ACT's concept differs by virtue of its link to a basic theory of language and its link to the other components of mindfulness. For example, there is no reference to attention since attention is an internal way of speaking about an interactive process of contacting events in the present moment but doing so in a way that is defused, accepting, and conscious—and all of that in the service of values and effective action.

Mindfulness practice is a critical part of the ACT model. Mindfulness is much easier learned by experience rather than simply talking about it. Unfortunately, although mindfulness practice may be beneficial for most people, only a small fraction of the human population engages in it. The rest of humanity is caught up with words, buying into words, fighting with words, and so on. ACT recognizes the benefits of formal practice but emphasizes informal practices. Thus ACT is attempting to develop new mindfulness methods in hopes that the functional core of mindfulness will be able to reach as many people as possible, not only through mindfulness practices that religion has promoted for thousands of years.

Many ACT practitioners were already using the word "notice" as a way of prompting mindfulness without explicitly invoking formal mindfulness practice. The matrix diagram took this to a new level because it's visual as well as verbal.

SM07-03 | The ACT matrix for addiction

Euihyeon Na

Department of Psychiatry, Presbyterian Medical Center, Korea

From an Acceptance and Commitment Therapy (ACT) perspective, addiction is conceptualized as a learned repertoire of behavior driven

by psychological flexibility such as experiential avoidance and cognitive fusion. Addictive behaviors are strikingly effective, over the short term, for people to avoid their unwanted inner experiences such as negative thoughts, affects, and physical sensations but also to make coherent consequences in line with their verbal rules about themselves and the world. However, addictive behaviors can cause serious disruption to their values and disconnect from their life areas in the long term. ACT can help people with addiction by fostering psychological flexibility and get back on track with their valued life. The key processes of ACT in addiction treatment as follows: (a) defusion from nonadherence and resistance, (b) evoking creative hopelessness, and (c) commitment to abstinence in accordance with value-consistent behavior. This presentation will discuss the possibility of ACT as a novel therapeutic approach to addiction and introduce the ACT matrix for people with addiction, which is an innovative tool for efficiently providing ACT in clinical settings.

SM07-04 | Revolutionary progress in Japan: Health insurance coverage for peer supporter activities

Cheol-Soon Lee

Department of Psychiatry, Gyeongsang National University, Korea

Acceptance Commitment Therapy (ACT) is a trans-diagnostic approach based on relational frame theory, contextual behavioral science, and evolutionary theory and aims at psychological flexibility. In the child and adolescent field, traditional behavioral therapy has remained in behavioral management or applied behavioral analysis in discipline and special education, but now can be linked to third-wave behavioral therapy such as ACT. Therefore, the effect of ACT in children and adolescents is expected to not only replace the effect of existing cognitive behavioral therapy in emotional problems but also affect discipline and special education in adjustment problems with developmental disorders.

For children and adolescents, the basic framework for applying ACT is the same as for adults. As a practical application form of ACT, ACT Matrix is useful not only for adults but also for children and adolescents. In terms of mindfulness without mindfulness, the Matrix may be suitable for children and adolescents who have difficulty accessing the concept of mindfulness. The ACT Matrix application for children and teens requires applications that are more creative and flexible than adults. By adding different ways of play to the Matrix such as cards or games, you can increase access to treatments in young people. Working with parents also will be an effective way in those groups.

There is already a lot of research on the effectiveness of ACT in adults, but evidence-based validation for children and adolescents is in the beginning. More evidence-based studies will be needed in the future.

Symposium 8

Cross-cultural psychopharmacology

SM08-01 | Cross-cultural psychopharmacology: An update

Weiguo Zhu

Department of Psychiatry, Harbor-UCLA Medical Center, University of California, Los Angeles, United States

As our society has become more ethnically and culturally diverse, an understanding of cross-cultural perspective in all aspects of psychiatry practice has become essential for clinicians. Race and ethnicity play roles in individual's response to psychotropic medications. The genetic profile can influence both pharmacokinetics and pharmacodynamics of a given medications, whereas other cultural factors have impact on the disease characteristics and treatment outcome. The cytochromes P450 (CYP) are members of a superfamily of enzymes of great interest to psychiatrists because they metabolize a large number of psychotropic medications. These enzymes show considerable genetic variation and their activities can be induced or inhibited by specific substrates. The genetic polymorphism of these enzymes resulted in individuals with a wide range of enzymatic activities, which can be classified as extensive metabolizers (EMs), slow metabolizers (SMs) or poor metabolizers (PMs). The proportions of such differential metabolizers vary among different ethnic groups. In the case of CYP2D6, 1-6% of Asians are poor metabolizers whereas 5-10% Caucasians are poor metabolizers. The serotonin-transporter-linked polymorphic region (5-HTTLPR) is a polymorphic region in serotonin transporter gene (SLC6A4). Since the polymorphism of its promoter region was identified in the middle of the 1990s, it has been extensively investigated, particularly in connection with neuropsychiatric disorders, such as mood and anxiety disorders. There are two forms of promoters based on the number of repeats: the short form (s) and the long form (l). Some studies found that 5-HTTLPR influences individual's response to life stress, and the s form may be associated with depression and anxiety. Other pharmacogenetic studies suggested that depressed patients with l allele responded better to serotonin specific reuptake inhibitors. There is also significant variation of 5-HTTLPR genotypes in different ethnic population, for instance, approximated 80% Japanese, 20-40% Caucasians and 30% African-American people carry the short form (s/s) genotype. The objectives of this brief presentation are: 1) To introduce the concept of cross-cultural psychiatry and psychopharmacology; 2) To summarize the research findings in this field, focusing on recent pharmacogenetic studies among various ethnic groups; 3) To highlight the principles that employ integrative approach in providing psychiatric care for ethnic diverse population.

SM08-02 | Cross-cultural psychopharmacology: An Asian perspective
Edmond Pi
Department of Psychiatry, University of Southern California, United States

During the past five decades, coincide with globalization process throughout the world, cross-cultural psychiatry has grown immensely; the psychiatric literature has particularly witnessed an extensive interest and expansion in the field of cross-cultural psychopharmacology. Cross-cultural psychopharmacology is a field that seeks to determine whether there are differences between ethnic groups in their response to psychotropic medications and the reason for such variations. Different doses of the same psychotropic medication are used in different countries, regions and even within the same clinical setting. It attempts not only to determine if such differences are due to genetic/biological factors, but also to study the influence of ethnicity and culture on psychotropic medications.

This presentation will provide an overview on the existing information in regard to Asian perspectives of ethno-psychopharmacology dealing with antipsychotics, mood stabilizers, antidepressants, and benzodiazepines. Explanations and clinical implications for the differences including translating science to sound clinical practice, as how to select the most appropriate psychotropic medications considering target symptoms and side effects for Asian ethnic groups will be addressed. Also, future directions with respect to cross-cultural issues of psychopharmacology will be presented.

SM08-03 | Biological consideration in cross-cultural psychopharmacology
Il Bin Kim
Department of Psychiatry, Hanyang University Guri Hospital, Korea

Most psychotropic drugs are metabolized by cytochrome P enzymes such as CYP2D6 or CYP2C19 in liver. Over the past decades, biology research has accumulated abundant evidence indicating that ethnicities and cultures may play a pivot role in eliciting differential enzymatic activities that lead to different therapeutic margin and side effect thresholds of psychotropic drugs. Especially, genes controlling the expression of drug metabolizing enzymes as well as the function of the brain are highly polymorphic, and the patterns and distributions of the polymorphisms are usually divergent across ethnic groups. To the extent that the genetic patterns determine drug response, ethnic variations in the genetic dispositions will lead to differential responses in clinical settings. In that regard, pharmacogenetics-guided psychotropic prescription is a first step that encompasses genetic polymorphisms distinguishing different ethnicities. This lecture will address latest biological evidences of cross-cultural differences in psychopharmacology as well as advanced pharmacogenetic knowledge that enables individualized precision medicine in the near future.

SM08-04 | Cross-cultural psychopharmacology in the elderly Nak-Young Kim
Department of Psychiatry, Keyo Hospital, Korea

Psychiatric drug use may show different trends for different ethnicities and cultural backgrounds. In this session, the trend of psychiatric drug use in elderly dementia patients is introduced through various articles. It would be great if it could be a time to introduce the use patterns of antidepressants, antipsychotics, and anti-dementia drugs according to ethnicity, cultural background and the type of medical system, and discuss the underlying cause if there are differences in patterns.

Symposium 9
Psychiatric distress among different groups of people at a general hospital
SM09-01 | Distress among surgical patients
Sanjeev Sockalingam
Department of Psychiatry, University of Toronto, Canada

Patient undergoing surgical procedures may experience a range of mental health and substance use issues either perioperatively or during the post-surgical recovery period. Surgical procedures may exacerbate patients' pre-existing psychiatric comorbidity and warrants timely assessment and intervention to mitigate psychiatric decompensation. Moreover, patients may experience a range of psychological sequelae after surgical procedures including acute distress, depression, anxiety, post-traumatic stress disorder and delirium. As a result, psychiatrists can play a critical role in pre-surgical assessment clinics and post-surgery care programs. Examples of effective integrated care models enabling timely psychiatric assessment and interventions include burn and trauma surgery programs and bariatric surgery programs. The following presentation aims to summarize common psychiatric presentations with surgical procedures, including bariatric (metabolic) surgery. The prevalence and presentations of psychiatric distress in surgical patient populations will be discussed. Treatment approaches to manage distress and psychiatric disorders in the inpatient and outpatient settings, including in integrated care models, will be reviewed.

SM09-02 | Distress among medical patients
Hochang Lee
Department of Psychiatry, University of Rochester Medical Center, United States

Psychiatric comorbidities are common (20-40%) among hospitalized patients with acute and chronic medical conditions and are associated with higher cost of care, poor clinical outcomes and staff dissatisfaction. Moving away from the traditional medical ward model,

University of Rochester Medical Center is exploring innovative ways of delivering both medical and psychiatric care for psychiatric patients with acute medical issues that require hospitalizations. Inpatient Medicine in Psychiatry Service (iMIPS) is a 20-bed acute medicine unit operated by URM Department of Psychiatry, and it is unique example of "reverse co-location" of acute inpatient medical care in psychiatric facilities. Also, unlike traditional CL psychiatry model, the Proactive Integration of Mental Health Care (PRIME) team at URM provides screening, early prevention and intervention of behavioural issues and deployment of multidisciplinary behavioural health team. Both programs have demonstrated excellent clinical and administrative outcomes. Through co-location and coordination of psychiatric service during the medical stay, these programs aim to provide an integrated behavioral and medical care for hospitalized patients with psychiatric comorbidities.

SM09-03 | Distress among hospital staff

Sun Mi Kim

Department of Psychiatry, Chung-Ang University Hospital, Korea

Most recent studies on the psychological distress of hospital staffs are associated with the current coronavirus disease 2019 (COVID-19) pandemic. The results of these studies may be viewed as a peculiar situation in the epidemic/pandemic, but in a way, they can also be seen as the most maximized form of psychological distress of hospital staffs.

The World Health Organization (WHO) has identified healthcare workers (HCWs) as a specific group at risk of developing a wide range of physical/mental problems as a result of working directly or indirectly with COVID-19 patients. HCWs are particularly exposed to transmission threats due to frontline work with patients with high viral loads and sub-optimal personal protective equipment. At the same time, severe stress, high emotional burden, long working hours, concerns about infection or spreading the virus to their relatives, lack of adequate support for the working environment, and lack of effective supportive care can affect the mental health of HCWs.

Given the current COVID-19 pandemic and potential future epidemic outbreaks, a comprehensive understanding of the negative impact of epidemic/pandemic on mental health of HCWs are important. There have been studies to synthesize and quantify the psychological symptoms of HCWs in epidemic/pandemic. HCWs have a variety of symptoms, including perceived stress, sleep disturbances, fatigue, burnout, anger, moral injury, depression symptoms, anxiety symptoms, symptoms of post-traumatic stress disorder, alcohol/substance abuse, and somatic symptoms.

These mental health problems are influenced by organizational, social, and individual factors and can interfere with the quality of patient care. For the HCWs to continue to provide quality patient care, psychosocial support must be provided to protect their mental health.

We will also discuss some of the suggested recommendations to prepare for before and after an epidemic/epidemic such as COVID-19.

SM09-04 | Distress among family members/caregivers of family

Hyun Jeong Lee

Department of Neuropsychiatry, National Cancer Center, Korea

Cancer diagnosis causes significant physical, mental, and social changes not only for patients but also for their families. During the treatment period, the patient's physical and mental difficulties must be supported, as well as the role that the patient played in the family must be replaced during or after the treatment period. The family must participate in treatment-related decision-making as the main guardian, and watch the distress of the side effects of the treatment. Throughout all of this, family members are forced to focus only on the patient, unable to express their physical and emotional distress.

The family is the informal caregiver and is the most important support group for cancer patients. However, the quality of life of the family of cancer patients is remarkably low in all of the physical, psychological, social, and spiritual areas.

The wives of male cancer patients often act as the primary guardians for their husbands. They experience the shock of cancer diagnosis, depression, mental pain, the pain of caring alone, and fear and sadness of death and recurrence during the disease treatment process. On the other hand, the husbands of female cancer patients are significantly less likely to play the role of main guardians than their wives, and the period is often limited to the early stages of treatment. One of the problems experienced by the spouse, whether the patient's wife or husband, is the difficulty in emotional regulation, which negatively affects the couple's adaptation. Also, many couples with cancer have problems with intimacy and sexual intercourse.

Cancer patients often have difficulties because they don't know how to tell their children about their cancer diagnosis, treatment, and the possibility of death. In order not to negatively affect the children of parents' battle with cancer, it is necessary not to hide the bad news, but to explain it in a way that is appropriate for the child's age.

Parents of childhood cancer patients are relatively young, so they have to cope with the family crisis while their economic and social base is not strong. Since caring for a patient should be a top priority, sacrifice is great in other aspects of life. In the meantime, they experience changes in the dynamics within the family. Although the solidarity between family members is strengthened, the family may collapse if conflict is resolved well.

A psychosocial intervention is needed to take care of the mental health of the cancer patient's family. Psychoeducation, group therapy, couple therapy, and family therapy could help the family take care of the health of not only patients but also their families by not neglecting to take care of them. Through the caring experience, you should help them discover the positive meaning of family life and emotional stability, and help them increase their sense of self-worth and reflect on life through helping the family.

Symposium 10

Sharing the experience for mental health and suicide prevention

SM10-01 | Prevention of suicide and attempted suicide in Denmark

Merete Nordentoft

CORE - Copenhagen Research Center for Mental Health, Copenhagen University Hospital, Denmark

Suicide is a devastating public health problem, afflicting individuals, families, and societies. Fortunately, continuous striving by the World Health Organization (WHO) to strengthen suicide preventive efforts is paying off. The annual number of suicide deaths decreased from one million to 800,000 worldwide during recent decades. A gloomy exception to this trend is the increasing rate of suicide in the United States (14.0 per 100,000). But Denmark's experience offers some hope that prevention of suicide is possible. Why has its decline in suicide been steeper than most other countries?

Historically, the Danish suicide rate was among the highest in the world. In 1980, it was 38 per 100,000 inhabitants over 15 years of age (only Hungary had a higher rate). But the Danish rate then began to decline, reaching 11.4 per 100,000 in 2007, roughly where it still stands today. This is among the lowest in high income countries.

Denmark's strategy to tackle suicide was multi-pronged and spanned decades; one of the most effective elements was restricting access to dangerous means for suicide. The government initiated restrictions on the availability of medication with high case-fatality, such as sedatives (barbiturates) and opioids (dextropropoxyphene, and introduced less toxic antidepressants (such as selective serotonin reuptake inhibitors). Removal of carbon monoxide from household gas and the introduction of catalytic converters in car exhaust systems (to reduce the emission of toxic concentrations of carbon monoxide) are likely to have been beneficial. In addition, restrictions on firearm availability and regulations requiring that weapons and ammunition be stored separately and locked up probably aided the decline. Psychiatric wards that were redesigned to eliminate opportunity are also thought to be a valuable contributing factor.

As in other Nordic countries, the Danish tax-based, universal and free health care included mental health since its introduction in 1933. All citizens have access to free psychiatric care, including separate psychiatric emergency rooms, early intervention services for young people with psychosis, and specialized treatment for anxiety and depression. A decline observed for the suicide rate among people with mental illnesses over recent decades might be related to better outpatient treatments. Some - but not all - other European countries have free public health incl. mental health care. It is our impression that it often is a combination of public and private insurance in most of the EU region. We have revised the text to better reflect this.

Furthermore, Denmark also implemented initiatives to reach those who are at immediate high risk; for instance, through 22 Suicide Prevention Clinics established in all regions in 2007. These clinics offer

persons with suicidal ideations or behavior practical support and counselling; the therapy has been linked to long term reductions in fatal (29%) and non-fatal (18%) suicidal acts. A Psychiatric Emergency Outreach team provides support to people in a severe crisis by having a psychiatrist and an ambulance on call seven days a week. Another project, the 'SAFE-project', recently began offering home visits and family support to patients discharged from a psychiatric hospital.

Can Denmark do even better? Further reductions in suicide could be achieved through targeted interventions for selected risk groups. Denmark has an abundance of unique, complete and individual-level register data, which cover the entire nation and can be linked together via a personal identifier, provide excellent opportunities to pinpoint high risk groups. These include populations with mental or somatic symptom disorders (including alcohol and substance abuse) as well as people experiencing social adversities and marginalized groups, such as homeless individuals, children in foster care, people living in protected housings and nursing homes, and incarcerated. Careful monitoring of vulnerable groups and community awareness initiatives will hopefully reduce the national suicide rate even further.

The Danish example shows that suicide prevention does save lives. Interestingly, it seems that universal initiatives that address large groups might have secured the largest gains. The body of evidence on effective efforts is substantial and policymakers should take charge to reduce suicide numbers.

SM10-02 | The strategic research for care for suicide attempters and its social implementation in Japan

Chiaki Kawanishi

Department of Neuropsychiatry, Sapporo Medical University Graduate School of Medicine, Japan

Since the sharp increase of suicide occurred in 1998, the national suicide rate had stayed around 25 per 100,000 people in Japan. In 2006, The National Diet enacted the basic act of suicide prevention. In 2007, the Cabinet adopted the General Principles of Suicide Prevention as a guideline based on the act.

Along with those, ACTION-J, a national strategic research on suicide prevention, has been conducted supported by Ministry of Health, Labour and Welfare as a part of its evidence-based health policy development program. ACTION-J study focused on prevention for reattempting suicide of suicide attempters, who are at the most potent risk of later suicide. ACTION-J aimed to clarify the effectiveness of the assertive case management intervention in a multicenter randomized controlled trial. The study participants were suicide attempters who were admitted to the emergency departments of 17 participating hospitals to receive critical physical care.

Participants who were assigned to the intervention group received the assertive case management intervention during their hospital stay and for at least 18 months after randomization. Of 914 eligible participants, 460 were randomly assigned to the case management group, and 456 to the enhanced usual care group. In the case management

group, a significant decrease in the incidence of recurrent suicide attempt was observed up to 6-month points (Kawanishi et al., *Lancet Psychiatry*, 2014); the secondary analyses revealed other fruitful outcomes (Furuno et al., *J Affect Dis*, 2017; Tsujii et al.; *J Affect Dis*, 2020; Norimoto et al., *BMC Psychiatry*, 2020).

Based on the outcomes, the ACTION-J study group developed a comprehensive 2-day training program for the purpose of fostering case managers who administer the ACTION-J intervention program with fidelity, and confirmed its effectiveness (Kawashima et al., *Psychiatry Clin Neurosci*, 2020). In 2016, the ACTION-J intervention program was adopted to the national medical payment scheme by Ministry of Health, Labour and Welfare. The Ministry mandated the comprehensive training program for medical staff in charge of caring suicide attempters.

For further dissemination and institutionalization, ACTION-J study group is continuing social implementation studies (Kawanishi et al., *BMJ Open*, 2018). Suicide is a complex phenomenon, and case-specific intervention is necessary. Korean and Japanese researchers have already exchanged our knowledge, and the author and colleagues performed an educational course on the case management intervention for suicide attempters in Seoul in 2018. The assertive case management intervention is considered also applicable to various individuals at risk of suicide affected by the COVID-19 pandemic in the world.

SM10-03 | Suicide prevention action plan and post suicide attempt case management in South Korea

Jong-Woo Paik

Department of Psychiatry, Kyung-hee University Scholl of Medicine, Korea

The suicide rate in the Republic of Korea had peak rate in 2010 and has declined for seven years (2011-2017) before increase in last year (2018). The decline was due to a number of factors; 1) some practical success in suicide prevention measures (paraquat ban and subway safety screen) by Suicide Prevention Law; 2) progress in media guideline and national campaign; 3) national level gatekeeper training(2 million) ; 4) organization of national and local agencies for governing of suicide planning by suicide prevention Law.

Suicide prevention in the Republic of Korea has been set as 100 Policy Tasks of new government at 2018 and the National congress passed new suicide prevention law that organize cross-governmental leadership led by Suicide Prevention policy committee headed by Prime Minister's Office. The government launched a new department of Suicide Prevention in Ministry of Health and Welfare, and published a new suicide prevention action national plan with 70% increase of suicide prevention budget with emphasis on collaboration at local and central level at 2018. Korea Suicide Prevention Center started supporting the emergency department-based case management program with 25 locations in 2013, and was expanded to 52 locations in 2018 and 85 locations in 2020 by central government budget.

Disasters can increase suicide. According to the Korean National Police Agency statistics, the three main causes of suicide in Korea are mental health, economic, and health problems. Complex factors affect suicide rates, and according to a psychological autopsy at the Korea Psychological Autopsy Center in Korea, suicide deaths had an average of 3.9 stressors. We are concerned stress factors has aggravated during the COVID pandemic.

In fact, according to Korea's online mental health survey by ministry of Health and welfare, the percentage of people who have thought about suicide has increased dramatically to 13.4% at NOV 2020. But fortunately, the provisional suicide death has been on the decline. The public-private mental health support group is promoting mental health during the COVID-19 pandemic. Mental Health Welfare Center and Specialist groups, including the Korean Neuropsychiatric Association, are also participating in telephone mental health counseling the counseling case has reached 1.4 million, which is in high demand. The 3T model, which led to the successful quarantine in Korea, should also be applied to suicide prevention. Increase non-face-to-face contact to identify high-risk groups and provide customized services quickly.

SM10-04 | COVID-19 and mental health in South Korea

Hanson Park

Department of Anthropology, Seoul National University College of Social Science, Korea

COVID-19 is not just an infectious disease, but also an anthropological phenomenon that has a wide range of collateral effects on the mental health and social psychology in the level of group. Generally, it is well-known that regional and global epidemics of infectious diseases have various effects on human mental health, especially maladaptive emotional reactions such as depression, anxiety, fear, anger, disgust, and maladaptive behavioural reactions such as increased aggression to others or oneself, unnecessary emotional or physical conflicts between individuals, voluntary social isolation, self-harm, and suicidal attempting. In particular, a long-term pandemic can worsen the out-group hate, and can lead to the emergence of Conflict between countries or ethnic groups or between subgroups within a group. These social-level psychological reactions become an obstacle to intergroup and intragroup cooperative actions for pandemic prevention and treatment. Therefore, when an infectious disease is prevalent, the level of psychological evaluation for oneself and one's group fluctuates up and down. As Emil Durkheim argues, social solidarity shouldn't be too tight or too loose. In both cases, vulnerable individuals can choose to commit suicide. In this presentation, I would like to talk about several sociocultural phenomena that emerged after the COVID-19 epidemic in Korean society. Also, I will discuss the effects of ethnocentrism on mental health and social psychology after the COVID-19 epidemic in Korea, based on the results of my preliminary research. Finally, based on Durkheim's suicide theory, I will talk about the relationships with suicide and pandemic, and add an evolutionary anthropological insight for them.

Symposium 11**Esketamine treatment in patients with major depressive disorder and suicidal ideation****SM11-01 | Ketamine and esketamine, from research to clinical practice: Experience at Massachusetts General Hospital****Cristina Cusin***Department of Psychiatry, Massachusetts General Hospital, United States*

Ketamine, an N-methyl-D-aspartate receptor antagonist, has been shown to be an effective treatment for patients with treatment-resistant depression (TRD) and suicidal ideation. Multiple clinical trials have demonstrated that subanesthetic doses of intravenous ketamine have rapid-acting antidepressant effect. Based on these research findings, academic clinics and outpatient ketamine clinics began to offer ketamine treatment as off-label intervention for TRD. However, only a few reports have examined the long-term outcome of maintenance ketamine treatment.

We opened Ketamine Clinic for Depression at Massachusetts General Hospital in 2018 and we have treated over 120 patients. At MGH ketamine treatment is offered to patients with severe and refractory MDD or BD, while patients with history of psychosis, current substance use disorder, or uncontrolled medical illness are not eligible for ketamine treatment. After psychiatric consultation and medical assessment, patients review and sign a consent for ketamine treatment which emphasizes that this treatment ketamine is not approved by the US FDA and that ketamine is given provided off-label for depression, in addition to potential risks and benefits. Patients are required to pay out of pocket for each infusion due to lack of insurance coverage for the procedure. At each visit, patients are evaluated and monitored by a staff psychiatrist, a nurse and an anesthesiologist. Symptom severity before administration is evaluated with the 16-item Quick Inventory of Depressive Symptomatology-Self Report scale (QIDS-SR16) at every visit and Clinical Global Impression-Severity/Improvement scales (CGI-S/I), before administration and at every subsequent visit. The initial ketamine dose is usually 0.5 mg/kg infused over 40 minutes. Depending on response and tolerability, the dose can be adjusted individually. Intravenous ketamine is administered with a twice-weekly schedule of twice a week for three weeks for as an induction phase, followed by maintenance with variable administration schedule (i.e. twice a week to every 12-6 weeks) based on duration of effect. Other pharmacological and psychotherapeutic treatments are continued as part of the usual regimen. Common side effects are nausea, confusion, dizziness, drowsiness and these effects subside within 30-40 minutes after the infusion.

During the symposium we will discuss the response rate observed in our clinical practice and discuss the challenge of working with an extremely ill group of patients. Because ketamine infusions are usually not covered by insurance, the high cost of repeated intravenous ketamine treatments is a major contributor to early discontinuation if the

perceived benefit is not sufficient to justify continuing with ketamine treatment. Yet, for a significant proportion of patients, ketamine represents an ideal option, as it is well tolerated and efficacious, with an antidepressant effect lasting for weeks, therefore allowing the patients to resume the prior level of functioning.

SM11-02 | Neural mechanism and clinical effects of esketamine in MDD patients with suicidal ideation**Hong Jin Jeon***Department of Psychiatry, Samsung Medical Center, Korea*

Esketamine is a new drug for MDD, which is used as a nasal spray. Esketamine is a non-competitive and subtype non-selective activity-dependent NMDA receptor antagonist. It is proposed that esketamine exerts its antidepressant effects through modulating glutamatergic neurotransmission in MDD patients. It is recently introduced in the clinical practice. However, it is still unclear what's the mechanism of action and how we can apply it more efficiently in clinical settings. Especially, previous studies have consistently reported rapid clinical effect on suicide ideation in MDD patients (MDSI). Treatment of MDSI is an important unmet need in the field of psychiatry. The mechanism of action on MDSI should be clearly understood before applying it to clinical practices.

SM11-03 | Suitable patients for esketamine and reduce potential side effects in MDD patients with suicidal ideation**Kiwon Kim***Department of Psychiatry, Veteran Health Service Medical Center, Korea*

Major depressive disorder (MDD) is the most common associated psychiatric diagnosis with suicide, based on reports of the lifetime incidence of suicide attempt between 10 % to 20%. For the reason of short time between suicidal ideation leading to attempt, immediate intervention is necessary, which brings limitation to standard antidepressants application requiring 4-6 weeks for its effect in clinical practice. The United States and European Union recently approved the Esketamine nasal spray, an N-methyl-d-aspartate(NMDA) receptor antagonist, for treatment-resistant depression treatment. It is considered to deliver these effects by influencing glutamate transmission transiently and lead to neurotrophic factor release and synaptogenesis stimulation.

Recent clinical trial results with phase 3 trials applying Esketamine nasal spray were reported including adults (18-64 years) with a diagnosis of MDD without psychotic features according to Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), which were confirmed by the Mini-International Neuropsychiatric Interview (MINI), either. Eligibility criteria also included affirmative response to MINI questions B3 ("Think about suicide [killing yourself]?") and B10 ("Intend to act on thoughts of killing yourself in the past 24 hours?") within 24 hours of randomization, Montgomery-Asberg Depression Rating Scale (MADRS) total score higher than 28 predose on day 1. Certain

psychiatric comorbidities were exclusionary (eg, current DSM-5 diagnosis of bipolar disorder, obsessive-compulsive disorder, antisocial personality disorder, borderline personality disorder), as were moderate-to-severe DSM-5 substance or alcohol use disorder within 6 months prior to screening, current or prior DSM-5 diagnosis of psychotic disorder, and positive result for phencyclidine, cocaine, or amphetamines. Use of esketamine showed significant reductions in the MADRS score, highlighted as early as 4 hours after initiation of treatment and lasted for 25 days. However, further trials and investigation are necessary for these differences were not significant, with no significant reductions on the Clinical Global Impression of Severity of Suicidality (Revised) (CGI-SS-R). On the other hand, positive expectation is emerging with another analysis, which showed greater effect than placebo on depressive and suicidality scores for more severely depressed patients and for those who had already showed suicide attempt.

Several key issues and unresolved questions regarding the clinical use of esketamine in the treatment of patients with suicidal ideation remain, followed by common side effects including dizziness, dissociation, headache, nausea, and somnolence. Possible impact of esketamine related addictive problems and the safety of long-term exposure on cognitive function are also on open question. Short lived dissociative side effects are also thought to be well tolerated but remains with the prohibition on driving on the day of treatment application. Impact on cognition are also controversial, which is positive in the short-term application but with possibility of pitfalls with high doses and long term application. Esketamine is an promising option in TRD population with suicidal intent, but careful approaches are implemented in clinical practice with more evidence through ongoing trials.

Symposium 12

Loneliness and connectedness of the elderly in COVID-19 pandemic

SM12-01 | Geriatric mental health in COVID-19 pandemic situation

Narei Hong

Department of Psychiatry, Hallym University Sacred Heart Hospital, Korea

COVID-19 has affected not only physical health but also mental health of global population. Elderly population is well known as a vulnerable population for COVID-19 infection and mortality.

Other than physical vulnerability, elderly population has several characteristics which can affect mental health in this pandemic situation. Physical disability including cognitive impairment, social isolation and low social economic status are well-known risk factors for mental health problems in disasters such as COVID-19 pandemic. Elderly people had tendency to have these risk factors more common than other population. Also, health anxiety, which has relation with pandemic situation of infective diseases, is common in geriatric

population not only in pandemic situation but also everyday life. COVID-19 has urged people to have social distancing and even locking-down, and it makes people to feel loneliness and distance from community. The loneliness is a common and significant feeling in geriatric mental health of modern era. So elderly population may be affected more from social distancing and locking down during this pandemic.

However, studies from many countries about geriatric mental health in COVID-19 pandemic have showed varied results. Many studies have results that elderly people have emotional distress not greater than younger subjects. The past studies on disaster psychiatry other than COVID-19 pandemic showed similar results and the symptoms of elderly people showed different profiles such as vague somatic symptoms or memory impairment from younger population of symptoms similar to post-traumatic stress disorder.

Although elderly population does not have more common mental health problems, it is important to take care them differ from younger population in COVID-19 pandemic. The government and mental health professionals should concern about their connectiveness to community and special strategies and services for frail and cognitively impaired elderly.

SM12-02 | Effect of loneliness on the mental and physical health of old people

Jae Myeong Kang

Department of Psychiatry, Gachon University Gil Medical Center, Korea

Humans are social and social relationships are essential to good health and well-being. Social isolation (an objective state of having few social contacts with others) and loneliness (a subjective feeling of isolation) are seriously affecting a significant portion of the elderly population. Accurate measurement of social isolation and loneliness is challenging, but there is strong evidence that many older people become socially isolated or lonely in ways that threaten their health. In the United States, a significant percentage of adults (35% of adults older than 60 and 43% of those aged 45 and older) report feeling lonely.

Social isolation and loneliness can worsen physical and mental health, including increased mortality, depression, and cognitive decline. Previous studies have found that loneliness has been associated with a high rate of clinically significant anxiety, depression, and suicidal ideations. The risk of developing dementia increased by about 50%. Social isolation is associated with a significant increase in the risk of premature death from any cause. Poor social relationships have been associated with a 32% increased risk of stroke and a 29% increased risk of developing coronary heart disease.

In this lecture, we will discuss the effects of social isolation and loneliness on mortality and morbidity. We will also talk about risk factors for social isolation and loneliness, the mechanisms by which social isolation and loneliness affect health, and the factors that influence these mechanisms.

SM12-03 | Price of a pandemic for elderly women's mental health

Prabha Chandra

Department of Psychiatry, National Institute of Mental Health and Neurosciences, India

There are several ways in which the lived experience of the COVID-19 pandemic for elderly has been different from those of younger people. The virus is known to have a higher risk for infection, morbidity and mortality in older adults including a higher severity of infection, more chances of dying, more co morbid conditions adding to disease burden and more adverse drug side effects.

In addition to the above, key factors that have determined mental health and well-being among the elderly of either gender include loneliness due to social isolation, a feeling of heightened vulnerability, inability to be independent about daily needs, decreased comfort with technology leading to further social isolation and anxieties related to finances as well as fears of being hospitalised all alone.

One would have expected data to have shown higher rates of depression and anxiety in the elderly particularly among older woman. However the limited number of studies done in this population have actually shown the opposite. Overall, rates of depression and anxiety have been lower among the elderly than among younger people. The reasons attributed to this lower rate of psychiatric morbidity include resilience and wisdom which help them adapt better to difficult circumstances.

But behind the available data and figures are hidden individual stories which don't seem to see the light of day. There is very less data from low and middle income countries other than China and also less data from countries where women have less agency. We know that ageism and sexism are important reasons for the marginalisation of older women in most countries. Older women in many societies have acculturated to be more within the family and majority of women in the above 65 years age group have probably not worked outside the home.

Women handle their lives through social connectedness and social engagement. For many women, visits from grandchildren and children give their lives meaning. The pandemic effectively deprived them of these contacts. Loneliness we know is an important predictor of depression and even in the UK, where older people usually live by themselves, rates of depression increased compared to pre pandemic rates and had a relationship with the degree of loneliness. Again no gender aggregated data is available.

The other factor that has not been considered during data aggregation or collection is the caregiving roles that older women perform and its contribution to poor well-being. In cultures such as India, wives of that generation are often younger than their husbands and tend to be a caregiver to an older spouse. During COVID-19, the responsibility of caregiving fell solely on women in many situations because professional care givers were not allowed inside homes due to social distancing. There may also be variations in psychiatric morbidity based on bereavement or hospitalisation of self or family members with COVID infection, economic deprivation, type of family and whether

women had help for household chores or not. The problems may also be different among those living in nursing homes and assisted living facilities and among single and widowed women.

While there has been much discussion about an escalation in domestic violence, enough attention has not been paid to elder abuse during the pandemic. The WHO defines elder abuse as a single or repeated act or lack of appropriate action, occurring within any relationship where there is an expectation of trust, which causes harm or distress to an older person. It is possible that being within the confines of a home led to higher partner violence as well as abuse from other family members through coercive control, psychological violence or plain neglect. The extent of this is currently invisible.

One major way in which people stayed connected during the pandemic is through technology and while older people had televisions and phones, handling more advanced technology to stay connected was a challenge. The gender and age digital divide further increased the problem and older women may have had poorer access to technology, lower motivation to use technology or a skill deficit. Probably for this reason, tele-health services were less used for the elderly during the pandemic compared to younger people.

It is unfortunate that adequate gender and age aggregated data is still not available about the emotional and social impact of the pandemic on older women, and this is even more so from low and middle income countries. One reason for the lack of data might be related to ways in which research happens during a pandemic. Most researchers used surveys sent through emails and smart phones, which might not be most appropriate for older women who are not skilled in technology or have other sensory challenges. Finding innovative methods of research and asking for their most preferred way of data collection maybe preferable. There is also great merit in using qualitative research to listen to narratives of the lived experience.

Despite its limitations, the available data gives us directions to prepare for future situations such as this pandemic. Finding ways by which a combination of health education and psychological support could be delivered, adopting inclusive language when talking about the elderly, valuing older women's contributions and avoiding negative emphasis on risk, finding ways in which elderly women can be supported such as through easy to use household cleaning aids, grocery deliveries on priority, protected hours in stores for the elderly and support with technology using simple user interfaces may go a long way in improving their wellbeing.

SM12-04 | Consideration for geriatric population during the COVID 19; Loneliness

Cheolmin Shin

Department of Psychiatry, Korea University Ansan Hospital, Korea

Because of the significant morbidity and high prevalence of loneliness, the World Health Organization has already declared a public health crisis prior to the COVID-19 pandemic. In the COVID-19 pandemic, social distance is a powerful strategy to combat COVID-19, however it inevitably results in a lack of social connectedness and loneliness.

Prior to the pandemic, most community elders were so active, and they participated in social gatherings, religious activities, travel, and many other social activities. They also have kept economic activities, cared for children, volunteered in community groups, and provided care for spouses and other relatives. Due to the COVID-19 pandemic, most of the above activities have ceased. For nursing home residents, family visits are an important way for them to feel socially connected, and the family is a only link to the outside world. However, due to the policy of restricting visits to nursing homes, residents of nursing homes have lost the means to feel connectedness to the outside world. Loneliness/social disconnection poses a particularly serious public health problem for the elderly because of their biological and psychosocial vulnerabilities. Loneliness/social disconnection is a risk of cardiovascular, autoimmune, neurocognitive, and mental health problems such as depression, anxiety and suicide. We should consider multiple approaches to reduce social isolation and increase connectedness to solve loneliness. Interventions such as one-to-one interventions and group-based interventions, which have been provided to prevent loneliness, should be reorganized because of difficulty of contact. Utilizing the existing social service network and healthcare system can be considered. Education and training related to social isolation and loneliness should be included in health professional and care worker training programs. It is important to develop and apply innovative technology-based interventions to improve the social connections of the elderly. The elderly should be supported through the available means so that social connections can be sustained. This can be implemented by smart phones, video calls, social media, etc. that utilize ICT technology.

Symposium 13

Screening, early detection and prevention for psychiatric disorders in child and adolescent psychiatry

SM13-01 | Autism spectrum disorder: Early detection and screening

Yeni Kim

Department of Psychiatry, Dongguk University College of Medicine, Korea

Autism Spectrum Disorder (ASD) usually begins before the age of 3. Some children with ASD show signs of developmental problems within the first few months of life or symptoms may not show up until 24 months. Some children with ASD may develop normally until around 18 to 24 months and then stop achieving new milestones, or they may lose the skills they have already acquired. Nearly 80-90% of the parents of children with ASD reported noticing developmental problems by 24 months of age. Screening, and evaluating children with ASD as early as possible is important to ensure that children receive the medical services and educational supports they need to reach their full developmental potential. In this talk, we review the early detection and screening process for ASD in South Korea. We assess the screening tools that are available and also the services that are available for the children found to be at risk for ASD.

SM13-02 | ADHD: Early detection and screening

Minha Hong

Department of Psychiatry, Dongguk University College of Medicine, Korea

ADHD is one of common psychiatric disorders diagnosed in childhood and adolescence. In DSM-5, it is included in the category of neurodevelopmental disorder and can be interpreted as the disorder with life-span course. The American Academy of Pediatrics has suggested that a comprehensive evaluation of ADHD symptoms in children aged 4-18 is needed. With the high burden of ADHD and high rate of comorbidity, it is very important to diagnose and treat children with ADHD in a timely manner. Recently, interest in a screening test capable of detecting ADHD for preschool age groups is increasing, and research is being conducted. The screening methods proposed for early detection of children with ADHD so far would be presented, and the appropriate age for early screening of ADHD, and tools or markers supporting the diagnosis will be discussed.

SM13-03 | Suicide: Screening, early detection and prevention

Yong-Sil Kwon

Department of Psychiatry, the Catholic University of Korea, Uijeongbu St. Mary's Hospital, Korea

Unfortunately, South Korea has had the highest suicide rate among the OECD countries for over a decade, with a suicide rate 26.9 per 100,000 in 2019. To effectively reduce suicide rate, nation suicide prevention policies have focused on adults and the elderly population, with a higher suicide rate. However, adolescent suicide rate is still the leading cause of death since 2009 at 5.6 per 100,000 people in 2019, suggesting that continued attention and solutions are needed.

In recent decades, youth mental health promotion project is based on schools worldwide, and suicide prevention strategies are being implemented based on the school system in a similar context. Since school is a place where students spend most of their time and a protective environment in which various structured, psycho-social support can be applied. School-based suicide prevention programs currently implemented in Korea can be described as follows:

1) Screening and early detection

For the past ten years, a nationwide school-based mental health screening test and mental health risk level-based support services are provided through the school system. Screening tests are conducted annually for the 1st and 4th graders of elementary school, the 1st grade of middle and high school students. A questionnaire developed separately for elementary school students and adolescents is used: Child Problem-Behavior Screening Questionnaire II (CPSQ) for children and Adolescent Mental health III) for adolescents. Suicide risk assessment is conducted from adolescents, and recently self-harm behavior evaluation item have been included as youth self-harm increases. Students who exceed the standard scores of screening questionnaire are interviewed with a counselor in the school

counseling system: 'Wee class', and students who need treatment according to the interview results are linked to a mental health clinic outside the school. In addition, to ensure that students at suicide risk not identified by the screening test, a checklist of student suicide warning signs for teachers is also presented.

2) Suicide Prevention

Universal prevention: The Ministry of Education in Korea recommends that all elementary, middle, and high school students are required to take a 'life respect and suicide prevention education' at each grade 4 hours per year, and education contents and programs that can be implemented systematically by combining with school curriculum are developing. Also, 'Look, Listen, Speak', a Korean gatekeeper program developed for various occupational groups, was recently developed into another version for youth students and teachers and will be applied soon.

Selective prevention: Counseling and therapeutic interventions are being conducted using school-based mental health counseling systems such as the Wee Project for students with mental health and suicidal tendencies. To reduce the stigma of mental health and improve the referral rate for treatment, a kind of bridge-building programs such as community cooperation model and Support project for visiting schools of mental health professionals were implemented as pilot projects.

Indicative prevention: The Ministry of Education is assisting students at risk of mental health such as suicide attempts and repeated self-harm through a supportive partnership from the Life Insurance Social Contribution Fund. The support system of treatment expenses is aimed to economic difficulties do not hinder access to treatment.

The importance of postvention is increasing as a response to suicide crisis. Based on the postvention guidelines for crisis support for schools with student suicide, the linkage system of regional offices of education, mental health center and schools is recommended to be operated immediately after suicide.

In conclusion, several school-based suicide prevention programs have been in place for over 10 years, but the youth suicide rate has not decreased so far. The trend in suicide rate can be interpreted as being in line with the global trend of increasing mental health problems in youth. Moreover, the prolonged global COVID-19 pandemic is likely to increase students' mental health and suicide risks as they have faced unpredictable psycho-social situations. To prepare for the expected deterioration of student mental health during or post COVID-19, it is necessary to evaluate the effectiveness of suicide prevention strategies that have been implemented so far and to strengthen the expertise of the school mental health support system.

SM13-04 | Pediatric bipolar disorder: Early detection and screening

Mani Pavuluri

Department of Psychiatry, Brain and Wellness Institute, United States

Pediatric Bipolar Disorder (PBD) was strongly debated 25 years ago, a pivot that lead to many studies in psychopathology, biology and treatment that established its existence.

Primary features of PBD include rapid cycling, irritability, mixed features of mania and depression, comorbid attention deficit hyperactivity disorder, and chronicity. PBD is now understood as a spectrum of mood symptoms that have variable configurations that include narrow phenotype as well as broad categories. Longitudinal studies have shown shift from one variant to another (Birmaher et al., 2009).

Child Mania Rating Scale (Pavuluri et al., 2006) can be completed by parents. It differentiates from ADHD and helps in recognizing PBD. If a child scores 20 more, it suggests that they may have a strong possibility of PBD and need to see a clinician for an assessment. Versions in several languages are available in public domain at the website: brainandwellness.com

Brain imaging studies as well as neurocognitive studies have added additional domain based knowledge in understanding of PBD beyond the clinical features.

Five functional brain circuits underlie the clinical presentation of the PBD:

1. Fronto-limbic circuit

face response circuit

Reactive or Occipito-limbic circuit

Cognitive circuit

Response inhibition circuit

It is extremely important to understand these brain imaging studies to take advantage of what would alter the biological dysfunction. For example, metaanalytic studies documented by Dr. Lee showed that attentional engagement helped reduce the amygdala activation and improved the prefrontal cortex function (Lee et al., 2019).

An integrated understanding of how the children with PBD present will unite clinicians, teachers and parents in accurate recognition of the PBD.

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Symposium 14

Why psychiatrists tend to make a polypharmacy decision-making in daily clinical practice?**SM14-01 | Overview of polypharmacy in Asian countries based on REAP survey****Chay-Hoon Tan***Department of Pharmacology and Psychological Medicine, National University of Singapore, Singapore*

Polypharmacy for patients with schizophrenia and other psychiatric disorders. Findings from 4 REAP surveys on the prescription of psychotropic drugs for patients with schizophrenia, and surveys on Antidepressants and Mood stabilizers from 2001-to 2018.

Introduction: REAP is the longest standing and the largest international collaborating research in the field of psychiatry in Asia. The study started in 1999 as a large scale collaborative research project in East Asia. The first 3 surveys conducted by clinicians on inpatients from 8 Asian countries and territories were on prescription patterns and the associated factors of psychotropic medication from patients suffering from schizophrenia from 2001 to 2008. In 2016, we conducted the 4th survey with both in- and out-patients from 15 countries and territories. More recently, the psychiatrists and clinical pharmacists also conducted surveys on the prescription patterns and the associated factors of antidepressants and mood stabilizers from patients suffering from mood disorders.

The details of REAP could be found at <http://REAP.Asia>. REAP has been approved as a part of research activities of Asian Federation of Psychiatric Associations (AFPA).

Objectives: In 2001, we surveyed prescription pattern of antipsychotics drugs for inpatients with schizophrenia in 8 Asian countries and territories using the unified research protocol and common questionnaire (Research on Asian Prescription Pattern of Psychotropic Drugs, (REAP). The multiple surveys aim to explore the evidence of the characteristics of prescription patterns of psychotropic medications in patients with psychiatric illnesses in Asian countries from 2001 to 2018. The other objective was to document the main adverse effects of antipsychotic drugs over the past 16 years.

Methods: Psychiatrists in Asia surveyed prescription patterns of psychotropic medications in patients with schizophrenia. The REAP study reviewed the prescription of a large number of inpatients from China, Hong Kong, Japan, Korea, Singapore and Taiwan in 2001 (N=2399), 2004 (N=2136), 2008 (N=2226) and both in- and out-patients with schizophrenia from Bangladesh, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Myanmar, Pakistan, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam in 2016 (N=3744). It also reviewed mood stabilizers from patients suffering from mood disorders (N=1134), using a unified research protocol and questionnaire.

Results and Conclusions: Polypharmacy of psychotropic drugs were observed in many countries and territories. The changing prescription patterns of psychotropic drugs and mood stabilizers in patients with schizophrenia and mood disorders have created multiple challenges for psychiatrists in Asia, which requires an urgent outcome study and review.

SM14-02 | Network-based analyses of patterns of psychotropic medication uses in Asian patients with schizophrenia**Seon-Cheol Park***Department of Neuropsychiatry, Hanyang University Guri Hospital, Korea*

The Research on Asian Psychotropic Prescription Patterns (REAP) is the most extensive international collaborative study in Asia in the field of psychiatry. During the study period between March and June 2016, the 4th REAP-AP survey enrolled 3,744 consecutive patients with schizophrenia from 71 survey centers in 15 Asian countries and areas. Our fundamental assumptions are as follows: The international differences in clinical manifestations of Asian populations can be attributed to the pathogenic, pathoplastic, pathofacilitative or pathoreactive effects of specific cultures. Most of all, the relationship between culture and psychopathology can influence the psychotropic medication prescription patterns in Asians population in collaboration with other factors including clinical practice guidelines, national insurance systems, clinicians' preferences, and other factors. Using the network-based analyses, we would like to present and discuss the symptomatology and psychotropic drug using patterns in Asian patients with schizophrenia.

SM14-03 | How to face and combat polypharmacy-based clinical practice: Case reports from an early-career psychiatrist**Muneomi Kayo***Kyushu University Hospital, Japan*

Polypharmacy of psychotropic drugs is generally regarded as an unappropriated thing, and many guidelines recommend monotherapy. However, during my two years of clinical experience as an early-career psychiatrist, many of the patients I treated were on multiple medications. In this presentation, I will introduce a case in which I succeeded in reducing the number of medications and describe my efforts to reduce the number of medications and problems in actual clinical practice. From the perspective of psychiatric diagnosis and treatment, the necessity of psychotherapy as well as pharmacotherapy will be discussed.

SM14-04 | A call for a rational polypharmacy policy: Based on an International Survey on Psychiatrists' Decision-making**Yukako Nakagami***Department of Preventive Services, Kyoto University, Japan*

In the field of psychiatry, polypharmacy refers to the prescription of multiple psychotropics for one patient. Polypharmacy may increase the risk of adverse effects, reduce medication adherence, and is not recommended according to general guidelines. To address this important issue of polypharmacy, we have conducted collaborative research on the prescription patterns of psychotropic drugs in Asia (REAP) since 2001. A comparison of international data revealed a high prevalence of polypharmacy in Japan. This finding prompted the Japanese government to establish a polypharmacy reduction policy. As such, restrictions have been implemented in a stepwise manner since the revision of the medical fee in 2012. After this policy was established, our 2016 survey demonstrated a decreased prevalence rate of polypharmacy in Japan. With regard to this result, it has been argued that the policy might distort the decision-making of psychiatrists with respect to treatment and compromise the quality of care due to the discontinuation of "rational polypharmacy."

"Rational polypharmacy" has been proposed by several reports. For example, a nationwide cohort study in Finland revealed the lowest risk of psychiatric rehospitalization following clozapine plus aripiprazole combination therapy in adults with schizophrenia. This specific polypharmacy pattern supported by evidence would be considered rational. Even without evidence, if evidence-based monotherapies with optimal dosages and durations are not effective, non-evidence-based polypharmacy can be chosen as a last resort. Preskorn and Lacey have proposed a guideline for using a combination therapy based on the $n=1$ trial in clinical practice. Following this guideline, polypharmacy, if required for the patient receiving treatment, would be considered rational. In this way, polypharmacy is rational in some settings. Considering both monotherapy as a first-line treatment and polypharmacy as a rational treatment, a balanced attitude toward polypharmacy should be recommended.

However, this balanced attitude toward polypharmacy can be distorted by laws, rules, and regulations related to the practice of polypharmacy. To test this hypothesis, we originally developed a questionnaire that evaluated the view of psychiatrists concerning polypharmacy. We then performed an international survey using psychiatrists' networks such as the consortium of REAP, the Early Career Psychiatrists section of the World Psychiatric Association (WPA-ECP), and the Japan Young Psychiatrists Organization (JYPO). The anonymous questionnaire was distributed both online and offline between June 1, 2018 and Oct 31, 2019. It was composed of the following three parts: (1) Psychiatrists' Attitudes toward Polypharmacy (PAP) questionnaire; (2) case vignette-based questionnaire, which is a useful tool for measuring health professionals' attitudes; and (3) questions covering factors related to polypharmacy.

(1) The PAP questionnaire was originally developed based on published research and expert opinions. It consisted of the following four items that were designed to gauge attitudes toward polypharmacy. The responses were scored on a 5-point Likert scale (1=not at all and 5=extremely): 1) depending on the situation, it can be an important treatment option; 2) absolutely needs to be avoided; 3) inevitable in severe cases; and 4) are you careful to avoid polypharmacy in your usual clinical practice? The sum of the scores was obtained by adding the scores for each item after reverse scoring for items 2 and 4. This score was named PAP score, where higher scores indicated more positive attitudes toward polypharmacy. (2) Using vignettes depicting typical cases of schizophrenia, nine questions on treatment decision-making (i.e., three related to polypharmacy and six to non-polypharmacy, such as electroconvulsive therapy) were asked (3) on the following five already-reported factors associated with the rise of polypharmacy were assessed: scientific, clinical, economic, cultural, and policy factors. The policy factor was evaluated using a question about the importance of a limitation/restriction linked to the use of psychotropic drugs, and responses were scored on a 6-point Likert scale (1=no limitation, 2=no importance, and 6=very important). The other four factors were assessed in a similar manner.

A total of 347 psychiatrists from 34 countries participated in our study. The PAP score (12.6 ± 3.0) was significantly correlated to the three treatment decision-making related to polypharmacy in case vignettes (Spearman's $\rho=0.28$, 0.21 , and -0.29 ; $p<0.0001$, $=0.00001$, and <0.0001 ; respectively). Multiple regression analysis revealed that low PAP scores were associated with the 'policy' factor ($\beta=-0.20$, $p=0.004$). A cultural effect was also revealed; culture in Korea was associated with high PAP scores ($\beta=0.34$, $p<0.001$), and that in India and Nepal with low scores ($\beta=-0.15$, $p=0.01$, and $\beta=-0.17$, $p=0.006$, respectively).

In this study, the policy factor was significantly associated with PAP scores, supporting the hypothesis that the Japanese government's policy has changed psychiatrists' attitudes and decision-making toward polypharmacy. To the best of our knowledge, this is the first report indicating the effect of a policy on psychiatrists' attitude toward polypharmacy.

Given the effect of policy on treatment decision-making, policy content is crucial. In Japan, a reduced medical fee was decided on the types and numbers of prescriptions, without considering "rational polypharmacy," which may compromise medical care. Furthermore, this policy can lead psychiatrists to refuse medical examination of patients with severe mental disorders and a higher likelihood of requiring polypharmacy. This deterioration of medical care caused by the policy should be avoided. In contrast, a policy should be established to improve medical care, which should be thoughtfully based on scientific and empirical evidence, perspectives from patients, psychiatrists' expertise, and constructive debate.

Symposium 15

Hikikomori: An update on research on pathological social withdrawal**SM15-01 | Screening and assessment for hikikomori and other forms of social disconnection****Alan Teo***Department of Psychiatry, Oregon Health & Science University, United States*

The appearance of people in Japan, especially young men, who stopped going to school or the workplace and spent most of the time withdrawn into their homes for months or years, came to be seen as an increasing social issue called Shakaiteki hikikomori (now simply called hikikomori) by the late 1990s. By 2010, the prevalence of hikikomori was approximately 1.2% of the Japanese population, and in 2016 a Japanese cabinet report estimated about 541,000 between the ages 15-39 to have hikikomori. Beyond Japan, cases of hikikomori have been reported in the United States, Hong Kong, Spain, and numerous other countries of varying sociocultural and economic background.

In this symposium, we will provide an update on hikikomori, highlighting recent research findings that have explored the condition as a form of pathological social withdrawal. Dr. Teo (USA) will introduce research on the use of the assessment of hikikomori, focusing on the recent development of screening instruments (scales) for hikikomori. He will contextualize these scales in comparison to other tools used for the assessment of social connection and disconnection. Dr. Sakai (Japan) will provide an update on the current state of psychological research on hikikomori in Japan. Dr. Kato (Japan) will probe the issue of psychiatric co-morbidity and hikikomori, considering diagnostic and treatment considerations. Finally, Dr. Choi (Korea) will present current findings on research on hikikomori conducted outside of Japan, including Korea and other countries of the Pacific Rim.

SM15-02 | Current status of hikikomori in Japan**Motohiro Sakai***Faculty of Education, University of Miyazaki, Japan*

In Japan, it has become clear that HIKIKOMORI occurs not only in young people but in all generations. While much attention has been paid to the older generation, HIKIKOMORI among the younger generation is still a major social problem, as is the increase in truancy. Even though HIKIKOMORI occurs in all generations, there is a common factor in the state of HIKIKOMORI: avoidance of social participation. Therefore, it is more important to promote social participation than to reduce problematic behaviors.

The onslaught of the coronavirus since the beginning of 2020 has had a major impact on the way HIKIKOMORI support is provided. HIKIKOMORI is closely related to social conditions, and it is feared

that the stagnation of economic activity will further increase the number of HIKIKOMORI. I would also like to introduce the impact of coronaviruses on HIKIKOMORI support.

SM15-03 | Psychiatric conditions that co-occur with hikikomori**Takahiro Kato***Department of Neuropsychiatry, Kyushu University, Japan*

Hikikomori, a severe form of pathological social withdrawal, has long been observed in Japan among youth and adolescence since around the 1990s. Hikikomori-like cases have recently been reported in many other countries. Hikikomori negatively influences not only the individual's mental health and social participation, but also wider education and workforce stability, and as such is a novel urgent global issue. I suppose that a variety of experiences especially playing experiences during developmental periods may induce hikikomori-like conditions in later life. In this presentation, I will introduce the etiology, definition, and co-morbid psychiatric disorders with hikikomori. Especially, I will show characters of hikikomori with major depression, modern-type depression, internet addiction, and/or autism spectrum disorder (ASD). We are proposing that "Pathological Social Withdrawal (Hikikomori)" should be included as a specifier in each psychiatric disorder: in future ICD/DSM systems.

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SM15-04 | Hikikomori outside Japan**Tae Young Choi***Department of Psychiatry, Catholic University of Daegu School of Medicine, Korea*

Hikikomori was first reported in Japan, but is a worldwide phenomenon that occurs not only in Asian cultures such as South Korea, India, Hong Kong, and China, but also in Australia, Europe (Spain, France,

Italy), the United States, and Canada. Hikikomori is considered to be closely related to culture, and attention is now being paid to how the Hikikomori phenomenon is appearing and what characteristics are different in various different cultures. In addition to research on Hikikomori support and treatment models suitable for each country's situation, it is necessary to establish a common evaluation tool and compare the characteristics of psychopathology.

The research on Korean Hikikomori (Oiettolie) began around 2001, and various studies have been conducted to date. Major research achievements in Korea so far include discovering the effectiveness of the Home visitation program and comparing the characteristics of Hikikomori outside Japan through international cooperation research. Currently, COVID-19 is expected to increase the Hikikomori phenomenon worldwide, and it has not been known what will change the Hikikomori phenomenon due to the quarantine policy or cultural characteristics of each country. It is expected that the understanding of the Hikikomori phenomenon will be improved through international cooperation research in the future. The recently planned Korea-Japan collaborative research can be a good example of such international research.

Symposium 16

Pandemic, trauma and mental health: Humanities and social science perspectives

SM16-01 | Quarantine & trauma: Mental health implications on a fragile balance between human right and public safety

Jung Hyun Lee

Department of Psychiatry, National Center for Mental Health, Korea

Quarantine consists in the isolation and immobilization of people who have been exposed to an infectious disease. Amid the prolonged COVID-19 pandemic, an increasing number of people are experiencing isolation and quarantine. As a public health measure, self-quarantine varies across countries. The Korean government requires people who came into contact with the confirmed patient to self-isolate for 14 days and be actively monitored at least twice a day via mobile applications or cellular phone. Penalties are imposed for violations of quarantine measures. Strict quarantine regulations have the advantage of preventing the spread of infectious diseases. Conversely, individual rights are overly limited and can exacerbate stress responses.

It is well-known that the experience of quarantine has adverse effects on well-being and mental health. The self-quarantine experience in itself can constitute a traumatic event beyond a mere stressor. Quarantined individuals reported psychological issues such as post-traumatic stress symptoms, anxiety, and depression. They also faced various stressors during and after quarantine, such as fear of infection, anxiety about family members, social stigma, and academic or financial difficulties.

Multidisciplinary mental health professionals have been cooperating working since the initial phase of the COVID-19 disaster to provide psychological support and prevention for quarantined individuals. The "Integrated Psychological Support Group for COVID-19" operated a 24-hour tele-counseling service for self-isolated people as well as confirmed patients and their families. Public health sectors and mental health experts should acknowledge that quarantine measures can be taxing regarding mental health issues. Concerning human rights, quarantined individuals sacrifice their privacy for public safety. Therefore, the government should provide them with valid information on quarantine measures and appropriate support. Additionally, available mental health services such as telepsychiatry can be useful for quarantined people amid the pandemic crisis.

SM16-02 | Disaster, social measures and mental health: What can we learn from history

Ho Kim

Department of Social Studies Education, G.I.N.U.E(Gyeong-in National University of Education), Korea

COVID-19 pandemic has brought fear and disarray to the entire world.

Countries are closing national borders and individual citizens are placing themselves in quarantine.

Before the coronavirus outbreak, it was not broadly understood that the term "pandemic" would someday become part of our everyday vocabulary.

However, humanity has always been plagued by contagious diseases. Pandemics and their effects during the Joseon Dynasty Korea (1392-1910) are explored.

SM16-03 | Anthropological perspective on pandemic, human behavior and mental health

Hanson Park

Department of Anthropology, Seoul National University College of Social Science, Korea

When a physical or mental trait is evolving, there may often be a corresponding selective pressure. Not all evolutionary traits are adaptive outcomes, but strong selection pressures can drive high levels of complex adaptive systems. And undoubtedly, the infectious disease was a strong selective pressure. Infectious diseases are one of the most common causes of animals to die earlier than expected. Because of these natural conditions, the organism has evolved a powerful, complex and sensitive immune system. The immune system can be roughly divided into three: innate immunity, acquired immunity, and behavioral immunity.

Behavioral immunity is a relatively recently proposed evolutionary medical concept that refers to preemptive emotional, cognitive, and behavioral responses to prevent the spread of infectious diseases.

This appears as an emotion of disgust and an action of avoidance. In short, it is the natural cause of feeling dirty toward a so-called dirty object. The connectivity of dirt and disgust is a universal and cross-cultural phenomenon widely observed in human and even animal society. It has developed into a complex sociocultural custom in a large, stratified society. Examples include exclusion of outgroup members, hatred of subgroups, hate of sexual minorities, and expulsion and seclusion of members suspected of being infected. Numerous cultural codes, religious rituals, and even some of civil law could be considered as the result of evolutionary struggles to prevent the spread of infectious diseases for millions of years.

Like other immune systems, the behavioral immune system (BIS) is often overactive. It is a kind of allergic reaction. When a regional epidemic or pandemic occurs, emotions such as depression, anxiety, fear, anger, and disgust are activated and can lead to depressive disorder, anxiety disorder, or obsessive-compulsive disorder. However, these emotions may reduce the risk of spreading infection by reducing new contacts, uniting internal members, reducing movement and raising alertness to outsiders. It is a primitive quarantine system that requires a significant cost. It is difficult to find a balance between excessive and underactive immune responses. Often, allergies or immune deficiencies can occur.

BIS is not a very efficient system nor a morally justified system, but it certainly has some practical control over the epidemic of infectious diseases during the prehistoric era, at least. Natural selection made us have excessive prejudice and disgust toward out-group members and various minorities. The spread of infectious diseases is an important environmental trigger that evokes this primitive nature. It was not a question of right or wrong, but a question of survival for the human history.

But is this primitive infection avoidance system effective in modern globalized society? There are various mental health problems and socio-cultural conflicts that take place in a pandemic situation of COVID-19. Is this just an inevitable cost? In this presentation, I will discuss desirable mental health strategies and sociocultural intervention strategies in the context of an infectious disease epidemic, based on these evolutionary medicine and anthropology. Also, I will discuss suggest quarantine strategies based on BIS.

SM16-04 | Understanding minds of people living in the era of pandemic: From the perspective of Collective unconscious

Nami Lee

Department of Psychiatry, Seoul National University Hospital, Korea

In addition to statistical and biological methodologies, psychological and philosophical approaches on COVID pandemic are necessary to understand the meaning of suffering stemmed from the pandemic.

In this presentation, transformative experiences related to pandemic crisis, both individual and collective, will be explored from analytical perspectives.

Although pandemic outbreaks undoubtedly brought a global tragedy, human-beings could paradoxically use this opportunity to

confront the real problems of our societies. Understanding human complexes from Jungian perspectives would provide theoretical frames for making substantial strategies. Witnessing systemic failures, especially in health systems, public has become aware of injustice, unfairness, and instability within society, which are related to inner shadow complex.

Structural and psychological reformation should be continuously questioned and practiced, despite social absurdities that are fundamentally originated from our mentality.

Human beings have never been free from natural disasters, but they survived and evolved into sophisticated and mature beings. Hopefully, psychiatrists would help people develop strong resilience through education and treatment.

Symposium 17

Recent advances in psychiatric neuroimaging study

SM17-01 | The neural mechanisms of plasticity in semantic cognition: Variable neuro-displacement hypothesis

JeYoung Jung

Department of Psychology/Precision Imaging, University of Nottingham, United Kingdom

The purpose of this talk was to explore an important research goal in cognitive and clinical neuroscience: what are the neurocomputational mechanisms that make cognitive systems "well engineered" and thus resilient across a range of performance demands and to mild levels of perturbation or even damage? A new hypothesis called 'variable neuro-displacement' suggests that cognitive systems are formed with dynamic, spare processing capacity, which balances energy consumption against performance requirements and can be resilient to changes in performance demands. Here, I tested this hypothesis by investigating the neural dynamics of the semantic system by employing 'perturb-and-measure approach'.

By combining continuous theta-burst stimulation (cTBS) with functional magnetic resonance imaging (fMRI), I perturbed the left ventrolateral ATL (vATL) and investigated acute changes in neural activity and effective connectivity of the semantic system. cTBS resulted in decreased activity at the target region and compensatory, increased activity at the contralateral vATL. In addition, there were task-specific increases in effective connectivity between the vATLs, reflecting an increased facilitatory intrinsic connectivity from the right to left vATL. These results suggest that semantic cognition is made resilient by flexible, dynamic changes including increased regional activity and functional connectivity in the semantic system. It reveals the intrinsic resilience-related mechanisms of semantic cognition, mimicking alterations caused by perturbation or brain damage. These findings provide a strong implication that the intrinsic mechanisms of a well-engineered semantic system might be attributed to the compensatory functional alterations in the impaired brain.

Previously, I demonstrated that the regional GABA concentration in the ATL predicted human semantic processing and GABAergic action is crucial to the neurobiological contribution of the ATL semantic function. In order to investigate neurochemical mechanisms of cTBS-induced neuroplasticity, I combined cTBS with multimodal imaging (fMRI combined with MRS). Participants had resting MRS and fMRI before and after cTBS outside of the scanner. MRS volume of interests (VOIs) were placed in the left ATL and vertex and GABA and NAA (reference) were estimated. cTBS was delivered over the ATL via TMS neuronavigation or the vertex as a control site with a week gap between the stimulations. In fMRI, the semantic task induced the significant activation in the ATL and the ATL cTBS reduced the task-induced regional activity. The regional GABA in the ATL was significantly increased by ATL cTBS compared to the vertex stimulation and the control VOI (vertex). These findings demonstrated that cTBS as the inhibitory TMS protocol successfully modulated semantically related regional activity and regional GABA concentrations in the ATL, leading to disruption in semantic performance in healthy participants.

Finally, I introduce a potential role of neuromodulation (TMS and tACS) in enhancing semantic cognition.

SM17-02 | Neuroinflammation and neurodegeneration in depression

Kyu-Man Han

Department of Psychiatry, Korea University Anam Hospital, Korea

Accumulating evidence has suggested that neural-immune interactions may contribute to pathophysiology of depression. Recent studies have shown that serum level of peripheral inflammatory markers such as interleukin-1 (IL-1), IL-2, IL-6, interferon- γ (IFN- γ), tumor necrosis factor- α (TNF- α), and C-reactive protein were elevated in patients with depression compared to healthy controls. Several studies have also suggested that neuroinflammation may also contribute to neurodegenerative processes in depression through the production of neurotoxic metabolites from kynurenine pathway or direct neurotoxic effect of proinflammatory cytokines. However, the neurobiological mechanism that how systemic low-grade chronic inflammation result in depression through disruption in structural and functional brain networks remains unclear. Recently, we found that reactive astrogliosis-related peripheral inflammatory marker - FAM19A5 - was significantly associated with neurodegenerative changes in depression. In our study, serum levels of FAM19A5, a novel chemokine-like peptide that reflects reactive astrogliosis and inflammatory activation in the brain was measured in 52 drug-naïve patients with major depressive disorder (MDD) and 60 healthy controls (HCs). We also obtained T1-weighted structural magnetic resonance imaging of all participants and analyzed the correlation between serum level of FAM19A5 and cortical thickness in

patients with MDD and healthy controls. We observed that serum level of FAM19A5 was significantly higher in MDD group compared to HC group. Among patients with MDD, serum FAM19A5 levels showed significant inverse correlation with cortical thickness in the prefrontal regions, left posterior cingulate gyrus, right cuneus, and both precune, which showed significantly lesser thickness in MDD group compared to HC group. However, there was no significant correlation of serum FAM19A5 levels with cortical thickness in HCs. This finding may suggest the possibility that serum FAM19A5 may be a promising peripheral inflammatory marker for the neurodegenerative changes in depression.

SM17-03 | Exploring the neurobiology of OCD through the concept of thought-action fusion

Sang Won Lee

Department of Psychiatry, Kyungpook National University Chilgok Hospital, Korea

Thought-action fusion (TAF) is a tendency of an individual to blindly establish causal relations between his/her own thoughts and external reality, such that they believe having a thought is the same as carrying out the corresponding action. Inflated TAF has been considered a central mechanism for developing obsessive thoughts. However, the neural mechanisms underlying TAF are yet unknown.

In this lecture, we introduced our recent studies related to neural mechanisms of TAF and tried to suggest the neurobiological mechanisms of obsessive-compulsive disorder (OCD) through the concept of TAF.

In our fMRI paradigm modified by Rachman's experiment (1996), participants were asked to read negative statements describing the expectation of positive or negative events associated with close persons (CP conditions) or neutral persons (NP conditions) during experiments.

In our first fMRI study using TAF paradigm for healthy subjects, both CP and NP conditions in negative statements commonly activated the lingual gyrus, caudate nucleus, precuneus, and several areas of the frontal cortex. Importantly, many of these regions were positively correlated with measures of OC (obsessive-compulsive) symptoms, especially for the CP condition. The CP condition showed higher activation in the insula and temporal gyrus than the NP condition. In contrast, the NP condition evoked higher activation in regions associated with mentalizing, such as the medial prefrontal cortex and dorsal anterior cingulate cortex than the CP condition.

Further study was designed for clarifying the differences in functional networks between healthy and OCD subjects. Forty-one OCD patients and 47 healthy controls (HCs) participated in the study. The conventional TAF condition (negative statements/CP) induced significant FC between the regions of interest (ROIs) identified using multivoxel pattern analysis and the visual association areas, default mode network subregions, affective processing, and several

subcortical regions in both groups. Notably, sparser FC was observed in OCD patients. Further analysis confined to the cortico-striato-thalamo-cortical (CSTC) and affective networks demonstrated that OCD patients exhibited reduced ROI FC with affective regions and greater ROI FC with CSTC components in the TAF condition compared to HCs. Within the OCD patients, middle cingulate cortex-insula FC was correlated with TAF and responsibility scores.

Therefore, we think TAF induction paradigm can be suitable for fMRI studies and characterized the brain regions engaged during this paradigm. In addition, our TAF paradigm revealed altered context-dependent engagement of the CSTC and affective networks in OCD patients. These findings suggest that the neurobiology of cognitive models corresponds to current neuroanatomical models of OCD. Further, they elucidate the underlying neurobiological mechanisms of OCD at the circuit-based level.

SM17-04 | Decreased cortical gyrification in patients with bipolar disorder

Kwan Woo Choi

Department of Psychiatry, Korea University Anam Hospital, Korea

Background: An aberrant neural connectivity has been known to be associated with bipolar disorder (BD). Local gyrification may reflect the early neural development of cortical connectivity and has been studied as a possible endophenotype of psychiatric disorders. This study aimed to investigate differences in the local gyrification index (LGI) in each cortical region between patients with BD and healthy controls (HCs).

Methods: LGI values, as measured using FreeSurfer software, were compared between 61 patients with BD and 183 HCs. The values were also compared between patients with BD type I and type II as a sub-group analysis. Furthermore, we evaluated whether there was a correlation between LGI values and illness duration or depressive symptom severity in patients with BD.

Results: Patients with BD showed significant hypogyria in various cortical regions, including the left inferior frontal gyrus (pars opercularis), precentral gyrus, postcentral gyrus, superior temporal cortex, insula, right entorhinal cortex, and both transverse temporal cortices, compared to HCs after the Bonferroni correction ($p < 0.05/66, 0.000758$). LGI was not associated with clinical factors such as illness duration, depressive symptom severity, and lithium treatment. No significant differences in cortical gyrification according to the BD subtype were found.

Conclusions: BD appears to be characterized by a significant regionally localized hypogyria, in various cortical areas. This abnormality may be a structural and developmental endophenotype marking the risk for BD, and it might help to clarify the etiology of BD.

Symposium 18

COVID-19 pandemic on mental health

SM18-01 | Effects of infectious disease – Related psychological stress on severe mental illness

Minyoung Sim

Department of Psychiatry, National Center for Mental Health, Korea

Previous outbreaks have had persistent mental health effects. Following the 2003 Severe Acute Respiratory Syndrome (SARS) pandemic, significantly elevated rates of psychiatric disorders and psychological distress were reported. In the context of the COVID-19 pandemic, there have been substantial increases in anxiety and depression, and domestic violence. Patients with severe mental illness were four times more likely to perceive higher stress related to the pandemic, and had two to three times higher risk of significant anxiety and depressive symptoms. Fears regarding acquiring infection may result in increased obsessive thoughts and delusion. Social restrictions have negative impact on patients with severe mental illness. Sudden disruption of community mental health services could increase the risk of disengagement, medication nonadherence, all leading to decompensation and relapse. Recent preliminary studies highlight the need for health services to provide extra psychosocial support for patients with severe mental illness during this pandemic including reducing social isolation and limiting exposure to pandemic news.

SM18-02 | Strategies of infection control in psychiatric wards during biological disasters

June Young Chun

Department of Internal Medicine-Infection, National Cancer Center, Korea

As of April 20, 2020, a total of 10,683 cases of COVID-19 have been identified in South Korea. An outbreak of COVID-19 with an extremely high attack rate happened in a psychiatric closed ward. One hundred two (98.1%) out of 104 patients were diagnosed with COVID-19 between February 20th and 26th, 2020. When a COVID-19 outbreak in the psychiatric hospital was noticed, epidemic response team, psychiatrists and physicians of the Ministry of Health and Welfare were dispatched for triage of patients. They classified patients according to their severity and transferred them to other nationally designated hospitals. Here, let me briefly report this outbreak, explore the contributing factors of the high attack rate, and further suggest infection prevention measures in psychiatric closed wards.

SM18-03 | The outcomes of the COVID-19 infection among patients with psychiatric diagnosis

Haewoo Lee

Department of Psychiatry, Seoul Medical Center, Korea

With the 2020 COVID-19 pandemic, community psychiatry has faced many challenges. Hospitals that treat mental illness need a safe environment to prevent infectious diseases and treat them, and for people with psychiatric diseases living in the community, prevention of infectious diseases has become an important consideration in traditional services such as face-to-face case management services.

It is not yet clear whether patients with severe mental illness are at high risk of being exposed to COVID-19 infectious diseases. Studies so far have shown that patients with severe mental illness may have difficulty obtaining information about infectious diseases or implementing rules related to infection prevention. In other words, patients with severe mental illness who live a daily life in the community are not at higher risk of exposure to infectious diseases than those who do not suffer from severe mental illness.

We need to carefully interpret the findings of studies on whether people with mental illness have a higher mortality rate when infected with COVID-19.

Therefore, we would like to discuss the risk of infectious disease exposure in people with severe mental illness and the factors that affect the prognosis of mortality in case of infectious disease.

SM18-04 | Consideration for community mental health services of severe mental illness during the COVID-19 pandemic

Hwoyeon Seo

Department of Psychiatry, Seoul National University Hospital, Korea

Along with the huge change in everyday lives due to the pandemic, care for people with severe mental illness has faced a formidable challenge. In this lecture, after looking through different ways to meet the challenge, I will share the experience of Jong-ro community mental health center in Seoul.

Symposium 19

Side effects of psychotropic agents in Asia

SM19-01 | The factor structure of EPS using the DIEPSS in patients with schizophrenia: Results from the 2016 REAP AP-4 study

Chika Kubota

National Center of Neurology and Psychiatry

Introduction: Drug-induced extrapyramidal syndrome (EPS) remains a major problem in clinical psychiatry. This study aimed to examine the

factor structure of drug-induced extrapyramidal symptoms observed in patients with schizophrenia and assessed using the Drug-Induced Extrapyramidal Symptoms Scale (DIEPSS).

Methods: The participants were 1,478 patients with a diagnosis of schizophrenia whose EPS was assessed using the DIEPSS in India, Indonesia, Japan, Malaysia, and Taiwan in the 2016 REAP AP-4 study. The records of the participants were randomly divided into two subgroups: the first for exploratory factor analysis of the eight DIEPSS items and the second for confirmatory factor analysis.

The participants were randomly divided into two sample sets. The first sample set was used for exploratory factor analysis (EFA), and the second sample set was used for confirmatory factor analysis (CFA). In EFA, the number of factors was determined using the scree plot. Maximum likelihood estimation and Promax rotation were adopted because a correlation between factors may exist. The items with a factor coefficient level greater than 0.3 were defined in the same factor. The best-fit model of CFA was determined based on the models obtained from EFA.

Results: The factor analysis identified three factors: F1 (sialorrhea, akathisia, dystonia, and dyskinesia), F2 (gait and bradykinesia), and F3 (muscle rigidity and tremor).

Their mean age was 40.2 (SD: 12.7) years. The participant distribution by country was 456 from India, 261 from Indonesia, 56 from Japan, 305 from Malaysia, and 400 from Taiwan.

The number of types of antipsychotic agents the patients had been receiving were: 1 type, n=957; 2 types, n=456; and 3 types, n=60. Six patients did not receive any antipsychotic agents. Of the 1479 total subjects, 25% (n=375) had been receiving first generation antipsychotics, 81% (n=1208) had been receiving second generation antipsychotics, and 38% (n=559) had antiparkinsonian agents. Duration from the onset until now is: less than 3 months, n=48; 3 - 6 months, n=40; 6 month - 1 year, n=47; 1 year - 5 years, n=273; 5 -10 years, n=261, 10 - 20 years n=444, 20 years or more, n=363; no information n=6. DUP is: less than 3 months, n=543; 3 months - 1 year, n=497; 1 year - 5 years, n=287; 5 years or more, n=76; no information n=78.

Discussion: In the first factor, four symptoms of akathisia, dystonia, dyskinesia, and sialorrhea were detected. The pathophysiology of these symptoms is heterogeneous and various etiologies are included. The representative three major symptoms of idiopathic Parkinson's disease are tremor, muscle rigidity, and behavioral hypokinetic symptoms including gait and bradykinesia. In the present results, the three items were not classified as the same factor but divided into two factors: the two symptoms of muscle rigidity and tremor were separated from the behavioral hypokinetic symptoms of gait and bradykinesia.

The principal pathophysiology of the four symptoms subclassified in the second and third factors are all involved in the dopamine D2 blockade. In patients with schizophrenia, it is often difficult to differentiate the negative symptoms of schizophrenia from the parkinsonian gait and bradykinesia detected in the first factors in the usual clinical setting, unlike the symptoms of tremor and muscle rigidity.

Conclusion: The present results suggest that the eight individual items of the DIEPSS could be composed of three different mechanisms: central dopaminergic mechanisms with the pathophysiology other

than acute parkinsonism (F1), acute parkinsonism observed during action (F2), and acute parkinsonism observed at rest (F3).

SM19-02 | Strategies of infection control in psychiatric wards during biological disasters

Andi Jayalangkara Tanra

Department of Psychiatry, Hasanuddin University Hospital, Indonesia

Recently, we conducted the psychotropic prescription studies, in coordination with the International Collaborative Studies on psychotropic prescription (REAP-Asia), as the largest and the longest international collaborative research project in Asia in the field of psychiatry. The aim of the study was to investigate the pattern of psychotropic prescription, to evaluate the factor that affect and the impact of the pattern, and finally to suggest the way to improve the quality of the pattern of prescription. The design of this project is a quantitative study of descriptive epidemiology.

The prescription patterns of 579 schizophrenia patients in 10 centers in Indonesia (research institute and hospital) were investigated during March - May 2016. The patients' socio-demographic and clinical characteristics and their prescriptions for psychotropic drugs were recorded using a standardized protocol and data collection procedure. The results showed that there still was a significant higher frequency of polypharmacies in the antipsychotics prescription pattern in Indonesia. There has been a major shift in the prescriptions from first-generation antipsychotics (FGAs) to second-generation antipsychotics (SGAs), which was also reflected in the incidence and severity of drugs induced EPS. Low-dose clozapine (25 mg/day) were frequently used, as well as the use of trihexyphenidil (2-6 mg/day). Tobacco use posed greater challenge compared to other medical comorbidities and other non-psychiatric drug use.

The results above provide a great challenge and also opportunity in order to provide a better of mental health services in Indonesia. This high demand urged the government to provide a great solution for the equity of health services given and for a better payment system.

Keywords: mental health service, REAP-study, psychiatrists, antipsychotics, Indonesia

SM19-03 | Brief introduction on prescription pattern and clinical characteristics of patients with mood stabilizer-induced cognitive side effects: Findings from the REAP-BD survey in Korea

Kiwon Kim

Department of Psychiatry, Veteran Health Service Medical Center, Korea

Cognitive function influence on various aspects of daily life function, which can lead to self-efficacy reduction and problems in social

interaction. Cognitive function change in mood disorders is often the talk of the town, but the degree of cognitive difficulties depends on numerous factors. These factors include the type of illness episodes, severity of illness, number of manic episodes, the duration of illness, and the duration of untreated illness. There were some of reports, suggesting cognitive difficulties apt to worse with numerous recurrences, severity of mood episodes especially with full manic and mixed states, accompanying psychotic features, and necessity of hospital admission treatment. Changes in cognition can be the early sign of new illness episode, which needs special attention leading to appropriate therapeutic action, preventing the onset of symptoms. More detailed observation on clinical practice with cognitive function in bipolar disorder subjects in appliance of medication. For the medication is essential factor for the therapeutic approach in bipolar disorder, followed by various reaction of subjects with bipolar disorder. Many individuals experience positive impact on their cognitive function, but some may experience cognitive side effects during the appliance of medication. It is hardly distinguishable whether cognitive problems are brought by the disorder or by the medications, careful clarification, and endeavor to distinguish these differences are helpful for the progress in treatment and long-term therapeutic relationship. The Research on Asian Psychotropic Prescription Pattern for Bipolar Disorder (REAP-BD) study would be of benefit to this investigation, due to its large sample size and number of participating countries. Therefore, in this study, Korean data from the REAP-BD study is assessed in order to delineate polypharmacy prescription pattern for Koreans with BD and related clinical features including side effect reports especially with subjective cognitive function. This presentation data came from the study aimed to differentiate between patients experiencing cognitive side effects and those experiencing no cognitive side effects during prescription of mood stabilizers. We analyzed 350 Korean adults who were diagnosed with bipolar disorder and were prescribed mood-stabilizing drugs. The patients were divided into two groups -patients experiencing cognitive side effects and those experiencing no cognitive side effects. We also compared the demographic and clinical characteristics between both the groups. The number of patients with an untreated illness longer than 1 year was higher in the group of patients experiencing cognitive side effects than in the group of patients experiencing no cognitive side effects. Further, the number of patients with manic symptoms at onset was higher in the group of patients experiencing cognitive side effects than in the group of patients experiencing no cognitive side effects. In addition, the proportion of patients in remission was higher in the group of patients experiencing cognitive side effects than in the group of patients experiencing no cognitive side effects. However, there was a significant difference regarding the type of mood stabilizer used between both the groups. Our findings suggest that there are clinical and demographic differences between people experiencing cognitive side effects and those experiencing no cognitive side effects during prescription of mood stabilizers. Still, it is not possible to know in advance

whether individuals on mood stabilizer will develop side effects on those medication. However recent research also reported positive impact on cognitive functions with mood stabilizer application. More elaborated research on various cognitive domains under mood stabilizer use and detailed information of usage of duration in mood stabilizer and their total dosage would be helpful to draw clinical implication. Even our research lacked more information on detailed accumulated dosage of mood stabilizer on each individual or their specific evaluation on cognitive function with objective neuropsychological tests, subjective feeling on their cognitive function during the medication treatment is also important information in clinical practice.

SM19-04 | Adverse events related to antipsychotic medications in Asia: Trend analysis from REAP-AP 1-4

Kok Yoon Chee

Department of Psychiatry & Mental Health, Kuala Lumpur Hospital, Malaysia

The International Collaborative Studies on Psychotropic Prescription (REAP) is the largest and longest international collaborative research project in Asia in the field of psychiatry, in particular psychopharmacology. REAP begins a large-scale survey on the prescription pattern of psychopharmacology in patients with schizophrenia in the years 2001 (AP-1), 2004 (AP-2), 2008 (AP-3), and 2016 (AP-4). From AP-1 to AP-4, data on adverse events related to antipsychotic medications were obtained. The adverse reactions induced by antipsychotics were classified into six types as movement disorders, autonomic adverse effects, endocrinological disturbance, metabolic dysfunction, cardiovascular adverse effect, and over-sedation. The trend of adverse events from AP-1 to AP-4 will be discussed during the lecture.

SM19-05 | REAP-AP4 survey: What does data from India suggest?

Sandeep Grover

Department of Psychiatry, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh

Aim: To evaluate the prescription pattern for patients with schizophrenia collected as part of the REAP-AP4 study.

Methodology: As part of the REAP-AP4 survey data was collected for the demographic variables, psychiatric symptoms, psychotropic medications, adverse drug reactions, and comorbidities. For quality assurance, the web-based recording system was used for data collection.

Results: Data on prescription patterns of 479 patients diagnosed with schizophrenia was collected from 5 centres in India as part of the REAP-AP4 survey. Most of the patients were aged between 20-39 years and two-third of them were male. Majority (93.5%) of the patients were prescribed oral antipsychotics and 12.94% were prescribed long acting

depot preparations. Second generation antipsychotics (SGAs) (83.9%) formed the bulk of the prescriptions of antipsychotics and first generation antipsychotics were used in only 18.8% of cases. When compared to the prescription of various antipsychotics in other countries participating in the REAP-AP4 survey, prescription of FGAs in India was much lower than 9 out of the other 14 countries. Polypharmacy (i.e., use of more than one antipsychotic in same patient) was observed in about one-fourth (25.7%) of the study participants. The rate of polypharmacy in India, was lower than that seen in 13 out of the other 14 countries participating in REAP-AP4 survey. Concomitant antidepressants (15.2%), anxiolytics (18.4%), and mood stabilizers (19%) were used in only a small proportion of patients. More than one third (37.6%) of patients were receiving concomitant antiparkinsonian drugs. Prescription of concomitant medications and antiparkinsonian drugs in India is comparable to that seen in other countries.

Conclusion: To conclude, REAP-AP4 data suggest lower rate of prescription of FGAs and lower polypharmacy rates in India compared to many other Asian countries.

Symposium 20

Digital healthcare

SM20-01 | Digital healthcare for obsessive-compulsive disorder

Dong Hyun Han

Department of Psychiatry, Chung-Ang University College of Medicine, Korea

Background: Traditional studies already used an exposure and response prevention inspired serious game to treat patients with obsessive compulsive disorder (OCD). We hypothesized that a mobile cognitive behavior therapy (CBT) program would be effective in treating OCD as much as a traditional offline CBT.

Methods: The digital CBT treatment program for OCD, OCFree, consists of 6 education sessions, 10 quests and 7 casual games. The information of 27 patients with OCD (15 offline CBT and 12 OCFree CBT) were gathered. During the 6-week intervention period, changes in the clinical symptoms and brain function activity were analyzed.

Results: The OCD patients treated with mobile cognitive behavior therapy (CBT) program showed greater improvement in anxiety symptoms, compared to the patients with offline CBT. Both offline CBT and mobile program CBT increased the functional connectivity within the CSTC tract in all patients with OCD. However, CBT using mobile program showed greater changes in brain connectivity within the thalamus and insula, compared to offline CBT.

Discussion: The OCD treatment App program was effective in the treatment of patients with OCD. The treatment effects of OCD treatment App program are associated with increased brain connectivity within the CSTC tract. Multi-sensory stimulation by education, quest, and games in OCD treatment App program increases the activity within the thalamus and insula in patients with OCD.

SM20-02 | Digital healthcare for eating behavior

Hyung Jin Choi

Department of Anatomy, Seoul National University College of Medicine, Korea

Developing effective and widely useful digital therapeutics (DTx) for eating behavior and obesity is a priority in health care because obesity is a major health problem.

This study successfully examined the efficacy of a newly developed, multifactorial, and daily-based personalized digital cognitive behavioral therapy (dCBT) model conducted by a psychologist via a digital platform for managing body weight, BMI, and body fat mass and showed a legacy effect even after the intervention terminated. This was performed by comparing this group to the active comparators using only the app as the control group. Furthermore, this study successfully explored the predictors for the efficacy of dCBT from the baseline characteristics and recommended them as precision medicine biomarkers, namely, depression, anxiety, self-esteem, and motivation. Regarding personalization, our dCBT was fully tailored to each participant's characteristics in multifactorial domains: the behavioral, cognitive, emotional, motivational, and physical domains. The therapist in our study altered the feedback styles based on data from five types of domains for every participant and conducted intensive daily monitoring.

For the first time, we discovered that human-based dCBT is capable of treating obesity using digital tools. Anthropometric measures, such as body weight and body compositions, were comparably improved by the dCBT model as well as physiological indices and obesity-related psychological factors. There was no relapse in weight change after the end of the intervention. We also found predictable psychological markers to estimate the efficacy of the digital CBT treatment for obesity.

These findings confirm that technology-based interventions should be multidimensional and are most effective with human feedback and support. This study is innovative in successfully developing and verifying the effects of a new CBT approach with a multidisciplinary team based on digital technologies rather than standalone technology-based interventions.

SM20-03 | Digital healthcare for depression phenotype screening

Jung Jae Lee

Department of Psychiatry, Dankook University Medical College, Korea

Purpose: Smartphones have a large complement of sensor-data that can potentially be useful in detection of depressive symptoms. The purpose of this study is to identify geriatric depression using mobile phone global positioning systems (GPS) in a community study.

Materials and method: We used a dataset collected from 40 community-dwelling elderly, which included GPS phone sensor data and the Geriatric Depression Scale (GDS) to evaluate depressive symptom. GPS features (Max distance, span, location variance, entropy, frequency of trip and length of homestay) were calculated daily over the entire study. To account for repeated measurements within subjects (days), we fit a mixed effect model with random and intercepts.

Results: The sensor data were collected for an average period of 15.1 days. All GPS features are found to be negatively correlated with GDS scores, of which Total distance was significant. (p -values < 0.05).

Conclusion: Our findings suggest that GPS features may be an important predictor of depressive symptom in the elderly and passively collected GPS data may have the potential as early warning signals of depression.

SM20-04 | Digital healthcare for memory training

Jun-Young Lee

Department of Psychiatry, SMG-SNU Boramae Medical Center, Korea

Background: Metamemory training is a type of useful training program for improving cognitive functioning in old age. Despite these advantages, there are limitations imposed by location or time constraints.

Objective: This study aimed to develop a smart speaker-based metamemory training and evaluate the efficacy of the smart speaker-based metamemory training in older adults without cognitive impairment.

Methods: This was a case-control cohort study. The speaker-based metamemory training program is comprised of three sessions per day for 8 weeks. Each training session took about 15 minutes. This program was implemented using smart speakers, not human trainers. All participants completed the Mini-Mental State Examination, Subjective Memory Complaint Questionnaire, Verbal Learning Test, Digit Span and Fluency tests, and Geriatric Depression Scale before and after training.

Results: A total of 60 subjects (29 in the training group and 31 in the control group) participated in the study. The training group showed significant increases in the delayed free recall, digit span forward, digit span backward, and fluency test scores compared to the control group.

Conclusions: This study confirmed the efficacy of smart speaker-based metamemory training in older adults. Home-based smart speaker-based metamemory training is not limited with respect to location or constrained by space, and may help older adults with subjective cognitive decline without requiring intervention by human professionals.

Symposium 21

Creating the safe environments of mental health services

SM21-01 | Se-Won Lim and the changes of mental health environment in Korea

Hwa-Young Lee

Department of Psychiatry, Soonchunhyang University Cheonan Hospital, Korea

Prof. Se-Won Lim was born in Daejeon city, South Korea. He graduated from Chungnam High School and Korea University School of Medicine. He completed his residency at the Department of Psychiatry, Korea University Guro Hospital. While working as a clinical instructor at Korea University Anam Hospital, his subspecialty was depression highly related to suicide. After that, he became a full-time professor at Sungkyunkwan University Kangbuk Samsung Hospital.

Prof. Se-Won Lim played a pivotal role in creating the Standardized Suicide Prevention Program for Gatekeeper Intervention in Korea. Korean people call this program Bogo Deudgo Malhagi. 'Bogo' means 'looking' (Careful observation). 'Deudgo' means 'listening' (Active listening). 'Malhagi' means 'talking' (Risk evaluation & Expert referral). Its acronym in Korean is BODEUDMAL. This acronym in English is Suicide CARE (Careful observation, Active listening, Risk evaluation & Expert referral).

In 2011, Bogo Deudgo Malhagi was developed by the Education Committee of Korea Suicide Prevention Association led by Professor Se-Won Lim with support of Korean Life Insurance Philanthropy Foundation. Since the development of the Suicide CARE, about 1.3 million people have received the Suicide CARE program in Korea.

He was sacrificed On December 31, 2018 while trying to save another person even to the last dangerous moment. In recognition of this, the Korean government designated him as a righteous dead person in 2020. After the accident, several laws have been enacted (Medical Service Act, Emergency Medical Service Act, Act on the improvement of Mental Health and the support for Welfare Services for Mental Patients).

SM21-02 | Administrative policies for hospital violence regarding mentally ill patients in Taiwan

Tsung-Yang Wang

Department of Psychiatry, National Taiwan University Hospital, Taiwan

In the past, the Mental Health Law regarding involuntary hospitalization for people with mental illness in Taiwan was challenged upon the adoption of the United Nations Convention on the Rights of Persons with Disabilities (CRPD) in 2014. The legislature of Taiwan passed the CRPD Implementation Law providing that the CRPD provisions "shall have domestic legal status". In response to this statutory principle, the

Mental Health Act (MHA) of Taiwan underwent a radical revision in 2008 that put more safeguard measures for people who required involuntary hospitalization. However, According to the data from the Department of Statistics, Ministry of Health and Welfare in Taiwan, the annual number of compulsory psychiatric admission has dropped dramatically in 2007-2008 (from 3171 to 1140) and in 2012-2013 (from 1221 to 772). The number dropped five times from 2005 to 2014 (from 3565 to 718) despite the increase of overall psychiatric admissions.

This phenomenon raised a general concern in Taiwanese society regarding community security, especially when hospital violence appeared to be more frequently reported in the media. According to Taiwan Patient Safety Reporting System, among 1609 harmful events in general hospitals, 62% of them were physical assaults and 33% of them were verbal conflicts; 88.4% of these events were imposed on other patients while 42.8% of them were imposed on the medical staff. Another survey in National Taiwan University Hospital showed that hospital violence happened most frequently in the psychiatric ward (61.5%), followed by the emergency room (14.7%). Despite the decreasing number of psychiatric compulsory admissions, the number of hospital violence showed no significant change over these years.

Furthermore, in response to these hospital violence events against the medical staff, the revision of the Medical Care Act also acquired swift consent from the legislature in 2014 and 2017. The newly revised Medical Care Act strengthened the police power to eliminate these violent events in the hospital and raised the penalty level for these behaviors. However, reviewing the court record from 2014 to 2018, only 33 cases were fined under this stature among almost a thousand hospital violence events reported to the Ministry of Health and Welfare in these five years.

In the review of these statistics change, it is time for us to establish a more evidence-based policy regarding what measures would be effective to protect the safety of hospital staff and the relationship between mental health and violence. Sole reliance on the statutory revision might not be an effective way despite many people believed in the intimidating effect of the justice system.

SM21-03 | The practical implications of involuntary treatment order in Australia and its humanitarian aspects

Christopher Lee

Department of Psychiatry, Canberra Health Services, Australia

Introduction: Involuntary psychiatric treatment orders (PTO; also known as CTO, CCO) are being used in all states and Territories of Australia. The author will present the use of PTO in the district of Belconnen, Australian Capital Territory (ACT) as an in-vivo example. In doing so, we shall consider some of the practical implications of PTO use, and the humanitarian aspects of PTO use.

The population of the district of Belconnen is approximately 100,000 people. One would expect the prevalence of approximately 1,000

patients with schizophrenia in Belconnen. Of the expected 1000 people, the public adult mental health team 'manages' approximately 200 of those patients. (The remaining 800 are managed by general practitioners and private psychiatrists.) Of the 200 case managed patients, approximately 50 are presently subject to PTO. (Hence PTO rate = 50/1000 or 5% of all schizophrenia in the area.)

What PTO is & allows: PTO is an order made under a Health Act, which mandates a person to be treated by a designated health professional. PTO can only be applied by and granted to a delegate of the Chief Psychiatrist of each State and Territory.

Usual criteria are:

1. proof of a defined serious mental illness (*Does not include dementia and intellectual disability)
2. refusal of treatment
3. loss of capacity
4. harm to themselves or others
5. the setting of treatment and what difference it can make/how

How PTO is applied and granted:

- Assessment followed by a written application (10 pages or so).

*Attached documents.

- A hearing within days to 2 weeks, attended by

1. presidential member, a tribunal psychiatrist, a member of the public.
2. patient +/- legal representation, advocacy group, family
3. applicant (psychiatrist or representative)
4. Public Advocates Office and HRC

- Either of the two outcomes. Order granted (immediate effect) or not.

- All orders have an expiry (maximum 6 months), and must be reviewed prior to the expiry. (Not frequently, but the Tribunal can initiate the review themselves.)

- This is not a Restriction Order.

What it means to the patient: Must follow all treatment recommendations. (If not -> contravention of the order)

At the same time, they are 'entitled' to all recommendations in the order.

Cannot change the designated professional at their leisure, however the patient can ask for;

- a second opinion
- change of the treating team by the Tribunal
- review of the order (appeal)

What it means to the family and other health professionals: The principle of confidentiality does not change whether on PTO or not.

In practice, PTO may act as a certain degree of encouragement of involvement of family and other help.

PTO 'status' shared between the wider treating team.

What it means to the treating mental health team: The patient is under the applicant's custody. (Any mortality = coronial inquiry)

Duty to provide the best available treatment for the patient, no matter what mental state they are in (e.g. displeased with the doctor's recommendation), without subjecting them to undue stress.

The process and progress of treatment will be reviewed by the Tribunal (and questions asked)

Humanitarian aspects (focusing on the patient): PTO to protect the rights (to be treated) and dignity of the people whose decision-making capacity has been compromised as a direct result of an illness of the brain. A path to a sustainable long-term treatment on a voluntary basis.

PTO as a means to improve the patient's quality of life and socio-economic status, and protect from marginalisation and criminal prosecution.

A means to utilise all available social resources for holistic rehabilitation and recovery in the least restrictive setting.

A degree of reassurance to the family, university, workplace, and court etc.

Enables the delivery of the most evidence-based treatment.

SM21-04 | Law and virtue: Cultural understanding of human rights and safety in mental health services

Chan-Seung Chung

Department of Psychiatry, Psychiatry, Maum Dream Clinic, Korea

Psychiatry in East Asian countries has progressed through Westernization and modernization to assimilate the psychiatry of the developed countries. However, the cultures of developed countries in the East and West are different. Problems occur when uniform standards are applied blindly without sufficient understanding of the culture and tradition of each country.

The industrialization and urbanization of the West further accelerated the admission of psychiatric patients. Since the 1950s, deinstitutionalization has dominated mental healthcare reforms throughout the Western world. However, in Asian countries the detention and institutionalization of psychiatric patients started with the introduction of Western medicine. Asian governments have been inducing deinstitutionalization through the legislation of the mental health law but instances of long-term institutionalization by resorting to expedient still exist.

In contrast to the Western liberal concept which sees each individual as having equal rights, traditional Asian culture emphasize more on harmonious interpersonal relationships, interdependence and mutual moral obligation. Such culture could have appeared in the form of the patients with psychiatric illness being detained to pursue the peace of the community and to save the face of the family rather than the patient's freedom and human rights.

In modern society, the human rights of psychiatric patients conflict with the safety of the society. The human rights of neglected patients should be given more attention when the safety of the society is insecure. The most preferred solution would be to guide them to treatment.

Mental health is being pressured to become globalized like so many other things. Globalization of mental health should not be imposed uniformly and should be applied based on the understanding of each countries' culture and tradition.

Symposium 22

Gender dysphoria - room for debate?

SM22-01 | Gender dysphoria - general issues

Philip Morris*Department of Psychiatry, Private Practice, Australia*

SM22-02 | Social contagion of gender dysphoria

Dianna Kenny*Society for Evidence-based Gender Medicine (SEGM), Australia*

The world is facing an unprecedented psychic epidemic in rapid onset gender dysphoria (ROGD), primarily among adolescent girls. In previous psychic epidemics among adolescents, (e.g., eating disorders, drug (marijuana) use and teenage suicide), social institutions sanctioned the behaviour and provided buffers and appropriate support to adolescents experiencing these mental health issues in an attempt to achieve desistance. On the contrary, gender dysphoria and the demand to change sex has become a societal 'folie à beaucoup' involving affected adolescents, their parents, schools, health practitioners, legal advisers, and law makers. In this paper, I review the evidence for social contagion of transgenderism in adolescents and society at large and try to account for this phenomenon, which includes an abrogation of knowledge about human sexuality and the adoption of nonsensical theories about gender development that are fanciful, illogical, and without foundation. I propose three mechanisms by which social phenomena are "spread" across social networks - peer contagion, deviancy training, and co-rumination in peer groups. Specific mechanisms of transmission such as low gender typicality, peer victimization, ingroups, the trans-lobby, and the role of social media in ROGD in adolescents are also discussed.

SM22-03 | Clinical vignettes of gender dysphoria

Cary Breakey*Child, Adolescent & Family Psychiatry, Private Practice, Australia*

Throughout the world there is progressing pressure to treat children and adolescents with dysphoria or confusion related to gender issues with the "affirmation" model. This simply accepts the child's identifying with a non-natal gender and proceeds down a path of commencing puberty-blocking drugs, initiating a life-time of cross-sex hormones, and facilitating complex surgical procedures. Issues of informed consent and competence for a child or adolescent to make, or agree to, decisions for these interventions are currently before courts.

Before the advent of pharmaceutical and surgical interventions these patients were helped, and problems almost all resolved, with a range of psychological, psychotherapeutic, social and family therapy approaches. This history of past successful management of is being ignored with the implementation of the simplistic "affirmation" model. Using vignettes from over forty years of clinical experience, this paper describes some of the diverse situations resulting in a gender disorder presentation, and the processes to resolution.

In almost all presentations of gender disordered patients there have been readily identifiable issues of family and personal history, trauma, abuse, as well as social and cultural influences. Dealing with these underlying issues has resolved the Gender Dysphoria, as well as improving the emotional health of the patient and other family members.

The presentation will be providing four examples, from many, of this approach, which is really the ordinary work of child psychiatry - individual and family interviews leading to understanding the particular dynamics for this child and family, and tailoring interventions which deal with the child's safety, security, and emotional needs, Other examples could have included:

- adolescents seeing gender change or suicide as their only choices to avoid threatened (undisclosed) incest, children conceived, consciously or unconsciously, as replacements after bereavement, gender issues as a focus/glue to keep conflicting parents together.

My current experience, and that of colleagues, confirms that these examples, would very likely be processed down the pharmacological and subsequent surgical pathways. They then face a life-time of medications with known significant side-effects, in addition to carrying their unresolved issues which led to the presentation.

I hope discussing these cases provides more support to providing appropriate care for these kids and families, We owe it to these children to help them understand the complexity of their situation, rather than being committed to these life-altering processes.

SM22-04 | Psychotherapy for gender dysphoria

Roberto D'angelo*Training and Supervising Analyst, Institute of Contemporary Psychoanalysis Los Angeles, Sydney, Australia*

The need for better access to health services for people experiencing gender dysphoria has gained increasing media attention over the past decade. Treatments offered by gender clinics consist almost exclusively of endocrine and surgical interventions. Psychological interventions are limited to psychosocial support to help individuals adjust to their new gender role. We no longer consider psychotherapy a viable treatment choice for gender dysphoria due to claims that it is ineffective and potentially unethical. This presentation will critically interrogate this claim and will explore why psychotherapy has been written out of mainstream gender treatment. A contemporary psychotherapeutic approach to the treatment of gender dysphoria will be outlined and contrasted with traditional approaches, highlighting why older approaches may have had limited effectiveness.

Symposium 23

Tao psychotherapy: Introduction to Tao psychotherapy

SM23-01 | Birth of Tao psychotherapy

Young-Suk Paik

Department of Neuropsychiatry, Wonkwang University School of Medicine, Korea

Tao psychotherapy is the fusion of the western psychotherapy and the eastern Tao(道). Tao is something that is realized inside a man, while psychotherapeutic results occur through the therapist's personality and experiences. Therefore, the birth of Tao psychotherapy can best be viewed through the process of its achievement in a person, and its manifestations in relationship with others.

Dr. Rhee Dongshick is the founder and leader of the Korean Academy of the Psychotherapists(KAP), which is the first organization of psychotherapy in Korea. The background of his birth and growth, the process of his training and activities, and the achievement he has accomplished show us the evolving process of Tao psychotherapy in Korea.

In 1974, he founded the Korean Psychotherapy Case Study Group, which was developed into the Korean Psychotherapy Study Group in 1976 and the present KAP since 1979. On April 1st 2001, KAP opened a lecture series named, "Introduction to Tao psychotherapy", and this is the first official use of the name "Tao psychotherapy". In August 2002, at the World Congress of Psychiatry, Yokohama, KAP held a workshop on Tao psychotherapy, and this was noted as the declaration of Tao psychotherapy to the world.

We are sure that his finding of "Tao is the highest form of psychotherapy" must exert a great beneficial influence and impact on the psychoanalysis and psychotherapy in the future. Tao psychotherapy will take on a central role in the future of psychoanalysis and psychotherapy, and it will become a historical event as the birth of a new civilization by fusion of Eastern and Western culture.

SM23-02 | What is Tao psychotherapy

Jung-Kug Lee

Dr. Lee's Psychiatric Clinic, Korea

To introduce Taopsychotherapy which was integrated with Eastern Tao and Western Psychotherapy by the late Professor RHEE Dongshick.

By reviewing the materials which were written or spoken by the late Professor RHEE Dongshick and his disciples. The late Professor RHEE Dongshick pointed out 'nuclear feelings, purification of mind, and empathy(compassion)' as three key words of Taopsychotherapy.

To achieve perfect empathy as a psychotherapist, it is necessary to eliminate one's nuclear feelings, in other words to purify one's mind.

SM23-03 | Self psychology & Tao psychotherapy: Similarities & differences

Allan Tasman

Department of Psychiatry and Behavioral Sciences, University of Louisville School of Medicine, United States

Many schools of thought, belief systems, and practices have emerged over the centuries to foster development and maintenance of individual self-awareness, self-esteem, self-regulation, and introspection. These sociocultural influences, including philosophical and religious aspects, have significantly influenced the methods of modern psychotherapy. In the West, for example, the evolution of psychoanalysis historically reflected the ancient Greek ideal of humanity, that is, the autonomous self-directed individual driven by the power of intellect, striving to gain dominion over nature. In the East, the self is defined much more as a self-in-relation-to-others and in harmony with the natural world. In the Western Hemisphere psychoanalysis was developed in the 1890's by Sigmund Freud. Of his many theories, he believed that early development proceeded primarily driven by physiological changes in the infant and young child. Influences of parents were viewed as mainly related to physical or psychological trauma. His mental structures of the mind, the id, ego, and superego reflected innate physiological and psychological drives, adaptive capacities, and internal standards for thinking, feeling, and behavior incorporated from significant adults and society. Dr Dongshik Rhee trained in classical Freudian psychoanalytic theory and practice in the United States in the 1950's with the aim of returning to Korea to introduce culturally modified psychoanalysis to Korean society through incorporation of Tao principles. This presentation reviews the assumptions and practices of both Tao psychotherapy and the development of the assumptions and practices of self psychology as it diverged from classical psychoanalysis. Self psychology, developed in the 1970's and still practiced primarily in the Western Hemisphere, has moved psychoanalysis much closer to Asian philosophies, such as the teachings of the Tao, in several important ways. These include a shift away from the individualistic self of Freudian theory and discarding Freud's id, ego, and superego theory, to one in which the self originates and is maintained as a self in relation to the other, much more in harmony with Asian cultures.

SM23-04 | What if psychodynamic psychotherapy encounters Tao psychotherapy?: Deborah Cabaniss vs. Dong Shick Rhee

Yong Chon Park

Department of Psychiatry, Hanyang University Guri Hospital, Korea

Objective: It is difficult to introduce Taopsychotherapy, for the word "Tao" maybe misunderstood as one of the components of Taoism.

However, it is not an easy task to clearly explain what “Tao” is, even through the book “Tao Te Ching” by Lao-tzu. The word “Tao” appeared in the first chapter of the book is ‘The way that can be walked are not the eternal way; The names that can be named are not the eternal name’. In my personal view, “Tao” is like “truth” and it can be compared to the goal of Buddhism, Christianity, and Confucianism. Dr. Rhee said Taopsychotherapy is the psychotherapy practiced by the therapist who had mastered Tao. Following the concept, Dr. Rhee is one of the very few true Taopsychotherapist and there are many followers who are trying to practice Tao. On the other hand, unlike Taopsychotherapy, psychodynamic psychotherapy is well conceptualized and verified and it is well summarized to learn.

There are certain benefits for the psychotherapists to know both parties of approach. Therefore, the author tried to compare the similarity and differences of both parties.

Method: The author gathered the information through the book “Introduction to Taopsychotherapy” written in Korean and other articles and personal contact with Dr Rhee. For the comparison, the author chose the book “Psychodynamic Psychotherapy” and “Psychodynamic Formulation” written by Dr. Cabaniss and communication with her. The author translated both books of Dr. Cabaniss and, in the 2nd Edition of ‘Psychodynamic Psychotherapy’, the author added the explanation for each chapter with his perspective based on Korean traditional culture. So, the author had an opportunity to study on the similarities and differences of each approach.

Result:

1. The strength in Dr. Cabaniss's book is that she summarized the whole process of the psychodynamic psychotherapy and explained very easily not to be biased towards any psychotherapy school. Any group of psychotherapists can agree with her idea. Potential weakness could inevitably from easier acceptance from the reader. She had to sacrifice deep and various information at the expense of easy acceptance by readers.

2. The strength of Dr. Rhee is that the idea of Tao is deep and pursuing the ultimate reality. He points to reach the level of Saint and to establish the full purification of mind. He compared ten pictures of searching for the cow which we can see at the temple of Buddhism. He stressed that among the ten stages of cultivation of mind, the last stage of psychoanalysis is stage 7. The weak point could be coming from ‘shooting in the dark’ type of learning path. There is no manual nor guideline how to learn Taopsychotherapy. He mentioned such as “learn the concept, then forget the concept”. Similar analogy could be made that when making someone to see the moon, at first one should follow the finger which points to the moon. Then, one should forget the finger and see the moon directly. However, it is difficult for the beginner to learn such way.

Conclusion: There are many kinds of psychotherapy in the world. Some says more than 500 kinds, and others say it could be more than 2000. Dr. Rhee had deep understanding of the western culture and the philosophy. After that he applied psychotherapy with equally deep understanding of eastern culture and philosophy. He could integrate the western psychotherapy and eastern Tao. That is the Tao psychotherapy. Such approach was possible only for an outstanding scholar like Dr. Rhee. However, for the average psychotherapist, it is better to

follow well-structured and summarized path of learning western psychotherapy first, then jump into the Taopsychotherapy. That way, after forgetting the concept, you would be able to enjoy the wonderful world of psychotherapy. However, it is difficult to give up following the finger which points the moon. Forgetting the concept and giving up the finger pointing is difficult task. However, there is no doubt that it is worth trying in order to enjoy the true and deep world of psychotherapy.

Symposium 24

Dementia management in Asia-Pacific countries

SM24-01 | Management of dementia in Korea

Dong Woo Lee

Department of Neuropsychiatry, Inje University Sanggye Paik Hospital, Korea

In the last few decades, Korean government has developed and implemented successive National Dementia Management Plans. Of these plans, “National Responsibility for Dementia” deserves special discussion. “National Responsibility for Dementia”, a bold approach to accelerate the implementation of dementia management system, was designed to meet the unmet needs along the progress of dementia. by establishing dementia an-sim (安心) center and dementia an-sim(安心) hospital nationwide and by decreasing the burden for the medical and welfare expenses of the patients and caregivers.

For the success of “National Responsibility for Dementia”, we should overcome some major HURDLES : moral Hazard, Uneven resources, Referral system, Deficient beds for patients with severe behavioral problems, Leadership, Expenses, Specialty

SM24-02 | Management of dementia in Japan

Shuichi Awata

Vice President, Tokyo Metropolitan Institute of Gerontology, Japan

According to the recent epidemiological and economic studies in Japan, the population of older people living with dementia was estimated to be increasing to about 7 million (prevalence rate: 20% of the population aged 65 years and older) and the societal cost regarding dementia about 20 trillion JPY (19 million USD; 4.14% of GDP) by 2025. When examining the projected number of people with dementia by age-class, the number of the oldest-old with dementia aged 85 years and older was estimated to be remarkably increasing, resulting in exceeding 70% of older population with dementia by 2060. It means that the number of the older people with complex mental, physical, and social problems (e.g. dementia, chronic illnesses, physical disability, social isolation and poverty) is rapidly increasing. On the

other hand, the prevalence of early-onset dementia was estimated at 35,700 (50.9 / 100,000 population aged 18 to 64 years old) in 2018 and was not expected to increase because of declining birth rate and younger population. However, investigation on the actual life situation revealed that many people living with EOD and their families experienced unmet needs and had a risk for social isolation, because neither the long-term care insurance services nor the disability welfare services were generally designed for people with EOD.

In these circumstances, the Japanese government established the Ministerial Council on the Promotion of Dementia Policies in 2018 and published the Framework for Promoting Dementia Policies on June 18, 2019. This Framework is the third national strategy for dementia in Japan following the Five-Year Plan for the Promotion of Dementia Measures (the Orange Plan) in 2012 and the Comprehensive Strategy to Accelerate Dementia Measures (the New Orange Plan) in 2015. The remarkable difference is that the Framework is not formulated by the Ministry of Health, Labour, and Welfare but through joint efforts involving the entire Japanese government. The Framework has the vision of the society which enable the onset of dementia become later than that of today and where people with dementia can live well with dignity and hope. To realize this vision, the Framework raise the fundamental concept, "advancing both inclusiveness and risk reduction like the two wheels of a cart", and set up the five pillars of policies as follows: 1) Promoting public awareness and supporting transmission efforts made by people living with dementia; 2) Reducing risk for dementia; 3) Enhancing healthcare, care-taking, and nursing services and supporting caretakers; 4) Creating barrier-free societies, developing services for people with early-onset dementia, and promoting social participation of people living with dementia; and 5) Promoting research and development conducted by industry and disseminating their results internationally.

In addition, it should be noticed that the Framework requires that every policies should be implemented from the perspective of people living with dementia and their families. In 2015, the World Health Organization (WHO) required that the human rights-based approach should be introduced in dementia measures in all countries. In 2017, the WHO published the Global Action Plan on the Public Health Response to Dementia 2017-2025 and raised the human-rights of people living with dementia as the first heading of the basic principle of that global plan. This philosophy should be promoted and disseminated in order to make a movement of worldwide dementia measures and ensure human rights of people living with dementia in the 21st century.

SM24-03 | Management of dementia in USA

Donald Royall

Department of Psychiatry, the University of Texas Health Science Center, United States

\$6.2 million (11.3%) of Americans age 65 and older are estimated to have a dementia in 2021. The prevalence of dementia is expected to increase rapidly between now and 2050 reaching an estimated annual cost of \$US1.1 trillion. In response to this challenge, the US has passed (2011) and is implementing the National Alzheimer's Project Act

(NAPA). NAPA's ambitious goals have met with mixed results but offer opportunities for international collaborations. Meanwhile, local groups are organizing to develop local solutions to dementia care. Secular trends due to climate change and the SARS-cov-2 pandemic will also need to be considered as NAPA evolves.

SM24-04 | Management of dementia in Taiwan

Te-Jen Lai, Li-Yu Tang, Su-Yuan Chan

Taiwan Alzheimer's Disease Association & Chung Shan Medical University, Taiwan

Background: Taiwan Alzheimer's Disease Association (TADA) was officially founded in 2002. It is a national non-profit organization. In 2005, TADA became a full member of the Alzheimer's Disease International (ADI). To improve the quality of lives of people with dementia, their carers, and families, TADA made many successful advocacy achievements as below. (1) Taiwan Dementia Plan 2.0 was launched in December 2017; (2) Taiwan's national Long-term care plan included coverage to people with Dementia age 50+; (3) 95 Integrated Dementia Care Centers (IDCC) and 494 Support Centers for People with Dementia and their Families (SPDF) were set up. (4) All 22 cities have issued local dementia action plans at the end of 2020.

Three aspects of Policy Advocacy: TADA embarked on a new strategic effort to influence national dementia policy. The three aspects of policy advocacy are as follows: partnerships with government, joint efforts of the civil society and connection with the international organization. In the aspect of partnerships with government, Ministry of Health and Welfare (MOHW) commissioned TADA to develop the second edition of the Taiwan Dementia Policy, the establishment of a national-level information system, the system for training general and specialized staffs in the health workforce and so on. In the aspect of joint efforts of the civil society, we held four sessions of consensus meetings and civic forums in different area of Taiwan, held a workshop on the dementia policy, conducted the online survey, to collect the suggestions and expectation for the Taiwan dementia policy. About the aspect of connection with the international organization, TADA invited the chair of ADI, Glenn Rees and the chair of Dementia Alliance International, Kate Swaffer to Taiwan. They are very helpful to us in promoting our national dementia policy. On 25 August 2017, the President of Taiwan, Tsai Ing-Wen, had an interview with Glenn and representatives from the TADA. The president committed to issue a new Taiwan dementia plan. Kate also helped us to raise the awareness of the human rights of people living with dementia in Taiwan. This became the task of the Control Yuan that will continue to track the government's effort to protect the rights of people with dementia.

Taiwan Dementia Plan 2.0: The Taiwan government issued the national dementia plan in August 2013. Taiwan became the thirteenth country who has a national dementia policy in the world. Furthermore, the Taiwan government announced the 2014-2016 action plan on dementia in September 2014. In response to population ageing and dementia epidemic, the Taiwan government adopted the World

Health Organization global action plan on dementia, the opinions of people living with dementia and their families into the draft of the second edition of the Taiwan Dementia Plan by the end of 2017.

The second edition of the Taiwan Dementia Plan covers the period 2018-2025. The policy identifies seven strategies, with action plans, targets, indicators set for each. The strategies are as the following: 1. Recognizing of dementia as a public health priority; 2. Raising dementia awareness and friendliness; 3. Reducing the risk of dementia; 4. Providing timely diagnosis, treatment, care, and support; 5. Providing support services for family carers; 6. Building information system; and 7. Promoting dementia research and innovation.

At the end of 2020, All 22 cities have issued local dementia action plans in 2020. Among them, 20 cities have established the cooperation task force between different government departments; 8 cities have budgeted for the dementia action plan; 7 cities have consulted with the people with dementia or family caregivers. In 2019, TADA formally established a self-funded dementia advisory group. There are 9 participants in the advisory group, including 5 people with dementia

and 3 family carers. The group meets once a month. People with dementia as consultants have proved themselves that they can make amazing contributions, by speaking for themselves in 10 World Alzheimer's Month activities and designing the most cognitive-friendly calendar.

TADA also promotes services for people with dementia and their cares, such as cognitive stimulation activities, caregiver support group, caregiver trainings and young coffee for people with young-onset dementia. Last but not least, TADA collaborates with government departments to develop strategies about driving, safety, right of work, long-term care services, etc. TADA will do our best to advocate for people living with dementia and their carers, and work with the Taiwan government, the civil society and ADI.

Keywords: national dementia plan, dementia policy, non-governmental organization