

**ORAL PRESENTATIONS**  
**(THURSDAY AUGUST 22, 2013, 16:00-17:50)**

**OP1: MEDICAL, SERVICES, WOMEN, FORENSIC, AND FAMILY ASPECTS IN PSYCHIATRY**

**A. Psychosocial Care for Oncology Patients: Experiences from the National Cancer Institute of Singapore**  
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Annually a third of the world's new cancers (estimated 3.4 million) and cancer deaths (estimated 2.4 million) occur in East and Southeast Asia where another 6 million people live with cancer. The burden of cancer care is huge. While advances are seen in prevention, early detection and treatment, the provision of psychosocial care still lags. We present the approach in setting-up clinical psychosocial care for oncology patients and preliminary findings at the National Cancer Institute Singapore. A Multi-modal approach was used: i) nursing staff training; ii) early detection of Distress, Anxiety and Depression amongst cancer patients; iii) a referral service for psychiatric assessment and psychological interventions; iv) Group and Mindfulness-based therapy sessions and v) recognizing caregivers burden. The program also provided training opportunities for psychiatry residents. Significant and sustained improvements were noted in Knowledge (Theoretical and Applied), Attitudes and Practice Behaviors in nurses who were trained. New patients screened in the ambulatory oncology setting were found to have Distress levels of 3.31 ( $\pm$  2.891, range 1 to 10), Anxiety and Depression levels on the Hospital Anxiety Depression Scale were 5.01 ( $\pm$  4.705) and 5.05 ( $\pm$  4.674) respectively reflecting caseness for some of the patients. Referrals from inpatients settings were also received and this revealed a delay in referral for psychiatric care. Most were terminally ill patients who were depressed and/or anxious. Distress and psychiatric sequelae are common issues in cancer patients and need urgent attention if we are to enhance oncology services and care for cancer patients.

**B. Prevalence and Factors of Depression among Type 2 Diabetic Patients**

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Depression is the fourth leading cause of global disease burden and the leading cause of disability worldwide. The prevalence of depression is raise in chronic illness such as diabetes. This study aimed to examine the prevalence and factors associated with depression in patients with diabetes attending a primary health care center. This cross sectional descriptive study included a random sample of 725 diabetes patients from 11 primary health care centers in Khon Kaen province, Thailand. Depressive symptoms were assessed using 9Q which has been developed and suggested by the Mental Health Department, Ministry of Public Health, Thailand. Prevalence of depression was examined by using percent and 95 percent confidence interval. Multiple logistic regression was used to examine factors associated with depression. 72.83% of the subjects were female. 56.41% was elderly. The prevalence of depressive symptoms was 15.83% with 95% CI 11.13-20.53. Prevalence of depression was higher for females than males (18.33% and 8.34%, respectively). The likelihood of depression was significantly higher with duration of diabetes (OR 1.08, 95% CI 1.02-1.13), HbA1c (OR 0.72, 95% CI 0.53-0.98), and perceive problems related to diabetes (OR 3.49, 95% CI 2.08-5.87). This study confirmed with previous studies that depression prevalence is common in patient with diabetes. Screening for depression in these patients is not yet into regular service. Effective strategy for screening is needed in order to increase accessibility for diagnosing and treatment. Psychosocial intervention is needed to decrease depressive symptoms.

**C. Professional Attitudes in Mental Health Service Delivery**

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The guidelines on the implementation of community mental health care (1,2) require that efforts should be strengthened to improve mental health through empowerment of the users of mental health services, their families and the health providers. These efforts should address issues such as stigma associated with mental illness, health promotion, disease prevention, access to health services and evaluation of the disease and the decision making power of individuals so that they can take control of their lives (3). The mentally ill have to be educated about their illness and how they can deal with it as the best clinical care of any mentally ill person is a collaboration between the clinician, the care-givers and the patients. There should also be policies in place that protect both the patients and the clinicians. Empowerment of the mentally ill should thus involve the recovery and construction of a functional sense of self in the midst of persisting dysfunction.(3) Educating relatives of the patient who has a psychiatric illness is also very important as these are the people who bear the brunt of the illness. (4,5). This presentation will address attitudes and responsibilities of mental health professionals that will

enhance development of a healthy relationship with care-givers and users mental health services; and also how such a relationship can lead to health promotion by dissemination of relevant information to increase better understanding of mental ill-health.

#### **D. Southeast Asian Female College Students' Attitudes toward Male Victimization among Intimate Partner Violence Context**

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Purpose: In this secondary analysis, we intended to describe Southeast Asian (SEA) female college students' attitudes toward male partners as victims in the context of intimate partner violence (IPV). Methods: The descriptive qualitative research method was employed to describe students' attitudes. Participants were female students, aged between the ages of 18-39, who self-identified as having a Southeast Asian origin e.g., Thai, Hmong, Laotian, Vietnamese, Cambodian, and Filipino. Participants were recruited through emails, flyers, announcements for student meetings, and referrals from universities. We conducted three focus group discussions where each group consisted of a mixed ethnic group of six SEA female students. The focus group discussions were audio-taped and lasted approximately 60-75 minutes. Transcriptions of the focus group discussions were analyzed using NVivo 9 qualitative data management software. Content analysis was used to explore the key components of IPV perceptions described by SEA students. Results: Five themes emerged: (a) Definition of intimate partner violence (b) General perception of male's roles in IPV; (c) Attitude differences between generations in male victims; (d) Perceived causes of vulnerable males; and (e) Help-seeking and supporting systems for male victim. Students expressed that generally, males are assumed to cause IPV. Even though this attitude is somewhat changed for younger SEA generations, some students expressed that they felt pity about male victims. In a SEA community, most cases of male victims were concealed and did not reach the resources. Conclusions: The findings indicated an essential foundation to guide a culturally-sensitive prevention program for Southeast Asian male partners.

#### **E. Sociodemographic, Forensic and Psychiatric Evaluation of Women Committed an Offense**

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Objectives: We aimed to investigate the etiology of recently increasing rates of offenses in women. Methods: Three hundred thirty women who were sent by court taken to psychiatric observation due to variety of offenses were recruited in the study. The forensic files of the women evaluated. Psychiatric evaluation, organic factors, state of intelligence and psychometric evaluation by Rorschach test were performed. The mental states of those women were evaluated in detail whether healthy or not. Results: The age range of the cases recruited in the study was 15-80 years. The mean age were 34,56 SD+12,3 years. The duration of education was 6,4 years. As professional state, most of the women were house wives. 47,3 % of the women were married, 28,5 % were single and 23,3 % were divorced. Forty-four women were diagnosed as schizophrenia, 48 women were bipolar mood disorders, 4 women were personality disorders and 26 women were anxiety disorders. 33,3 % of the committed murder, 9,7 % of them attempted murder and 12,4 % of women committed injury. Conclusion: The rates of offenses in women have been increasing due to socialization and equality of women and men in socio-economic life. The ratios of offenses in the women to men were gradually increasing recently.

#### **F. Mental Illness among Inmates in Correctional Facilities (Study Case of 5 Correctional Facilities in Indonesia)**

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Objectives: There is lack of reliable data about mental illness in correctional facility population in Indonesia, thus this study served as basic assessment to established data about mental health problems on several Indonesian correctional facilities to be followed by providing mental health services on those facilities. Methods: In this study, the authors used Mini International Neuropsychiatric Interview (MINI) to assess mental disorder in inmates, in which each inmate could have more than one disorder. Assessment process was conducted by medical doctor and other correctional personnel, whom previously trained to administer MINI, supervised by psychiatrist. Assessment was conducted between December 2010 and November 2012. Of 1809 inmates in 5 correctional facilities, 1209 inmates were screened among reception and 600 screened during their sentenced period. Duration of interview is 20 minutes. Results: 1175 inmates (64.99%) were assessed with MINI disorder. Subjects had a mean of 2 disorders. From all diagnoses, the highest occurrence found on substances/drugs dependence (648 cases), while the lowest occurrence found on agoraphobia with panic

disorder (17 cases). Conclusions: A high number of mental health problems in correctional facilities was found and it is suggested for each correctional facilities to have mental health services for inmates.

### **G. Family Ties as a Protective Factor for Illicit Drug Use: Implications from Amphetamine and Heroin Users**

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Amphetamine and heroin are two of the illicit drugs to which many of the inmates in detoxification centers in Taiwan are addicted. The control theory holds that connections to social norms (e.g. ties to family) help prevent delinquent behaviors such as drug use. This study aimed to examine the relationship between family ties and the frequency of amphetamine use. We adopted a parallel analysis to compare the results with a previous study on heroin users. We examined the medical records of 180 male drug offenders of amphetamine admitted to the Tainan Detoxification Center in Taiwan between 2002 and 2003. We performed linear regression to evaluate for associations. We found that an increase in the number of ties to the different domains of family was associated with a lower frequency of drug use among amphetamine users (coefficient = -2.63, 95% confidence interval: -4.36 ~ -0.90). The negative association of family ties on the frequency of drug use was larger for amphetamine users than for heroin users (coefficient = -2.63 vs. -1.97), after we adjusted for other social support variables. A larger beneficial effect of family ties on amphetamine use than on heroin use provides treatment implications of family therapy for illicit drug use.

## **OP2: PSYCHOTIC, MOOD, AND ANXIETY DISORDERS**

### **A. The Relationship between Beliefs of Schizophrenic Patients about Their Auditory Hallucinations and Self-Esteem**

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**OBJECTIVES:** Auditory hallucinations are one of the common symptoms of schizophrenia. We assume that the patients' self-esteem has an important role in determining the content of their hallucinations. **METHODS:** Seventy inpatients diagnosed as schizophrenia were enrolled in the study. Patients are assessed through beliefs about voices questionnaire, evaluative beliefs scale, topography of voices rating scale, Rosenberg self-esteem scale, life quality scale in schizophrenia. **RESULTS:** 34.3% of the patients had positive beliefs, 65.7% had negative beliefs about their auditory hallucinations. Disease duration was 10 years for the patients who had positive beliefs and 7.2 years for the patients who had negative beliefs. Noncompliance or irregular drug usage was found as 29.2% in patients who had positive beliefs about their hallucinations. 87.5% of the patients who had positive beliefs had high self-esteem, 8.3% had moderate self-esteem, 4.2% had low self-esteem. On the other hand the patients who had negative beliefs about their hallucinations; 8.7% of them had high self-esteem, 13% had moderate self-esteem, 78.3% had low self-esteem. This difference was statistically significant ( $p < 0.05$ ). Mean score of quality of life in positive believer group was 87.58, in negative believer group was 52.57. This difference was statistically significant ( $p < 0.05$ ). **CONCLUSION:** The patients who had positive beliefs about their auditory hallucinations had higher self-esteem, better treatment compliance, shorter disease duration, more positive thoughts about themselves and others and better quality of life compared with patients who had negative beliefs about their auditory hallucinations.

### **B. Clozapine Use and Outcomes among Patients with Treatment Resistant Schizophrenia**

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**Objective:** The phenomenology of patients with schizophrenia is similar world-wide, regardless of culture. However, the prognosis is variable both internationally and within national groups of patients. Furthermore, despite advances in pharmacological treatment, a significant proportion of patients with schizophrenia continue to show residual symptoms and disabilities due to poor response to antipsychotic medication. This study retrospectively assessed differences in outcome by gender, ethnicity and age among a group of treatment resistant patients with schizophrenia. **Method :** Patients in the catchment (350 000 people) of a single New Zealand public mental health provider (Waikato) formed the study group. Information concerning demographic profiles, Health of the Nation Outcome Scales (HoNOS) ratings and details of Clozapine usage were extracted from clinical records and the data base. **Results :** Gender, ethnicity and age did not emerge as significantly associated with any of the outcome variables except for the 30–40 year olds having more improvement on overactivity/aggression ratings than younger or older patients. **Conclusions:** Despite these negative results in the New Zealand context, there remain many unanswered questions about the higher rate of service use by Maori. Replication of this study on a larger cohort of patients may be indicated before discarding the idea of potential links between ethnicity, treatment choice and outcomes.

**C. Antipsychotic Drug Prescription Pattern for Inpatients with Schizophrenia at Srinagarind Hospital**  
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Objectives: to study antipsychotic drug prescription patterns for patients with schizophrenia and factors associated high dosage and polypharmacy prescription. Methods: A prospective descriptive study was conducted. Subjects were all patients with schizophrenia who had been admitted to psychiatric ward at Srinagarind Hospital during 1 April 2010 to 31 March 2011. Data record forms consisting doses and types of antipsychotic drug prescription were collected. Data analysis used descriptive statistic. Results: Total 49 visits were recruited; majority was male (63.3%) and mean aged of 38.7 years old. Mean duration of illness was 11.6 years (SD 9.5). Mean number of hospitalization was 3.5 (SD 2.8). The most frequent psychiatric symptoms were delusions (75.5%). Mean length of stay in the hospital was 16 days (SD 10.1). Conventional antipsychotics were prescribed as much as second generation antipsychotics as 38.8%. The most prescription for the first-generation was haloperidol (25.0%) and for the second-generation was clozapine (28.6%). Sixty-one percent of patients received a single antipsychotic drug which mostly used second generation (60%), while 38.8% of them took two or more antipsychotics (polypharmacy) which mostly used combinations of both (57.9%). The mean daily dose of antipsychotics for all was  $750.10 \pm 503.01$  mg of chlorpromazine dose equivalent. Factors associated with high-dose prescription was being current smoker (OR=5.17, 95%CI=1.24-21.59, p=0.027), duration of illness less than 10 years (OR=10.42, 95%CI=10.42-89.13, p=0.012) and aggression (OR =4.73, 95%CI=1.18-19.02, p=0.027). Conclusion: Antipsychotic prescription pattern for Thai inpatients with schizophrenia was in moderate dosage. High-dosage associated with current smoking, less chronicity, and aggression.

**D. Thyroid Dysfunction and Bipolar Affective Disorder-Is There a Connection?**

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Introduction: Hypothalamo-Pituitary-Thyroid axis dysfunction in the pathophysiology of bipolar disorder has received less attention as compared to that in depressive disorder. Objectives: To study the prevalence of hypothyroidism in patients diagnosed with bipolar disorder and compare it with a population norm. Methodology: In our study, we examined the case records of 84 cases of bipolar disorder admitted to the Department of Psychiatry in a tertiary referral center during the year 2010-12 and attempted to find out the prevalence of subclinical hypothyroidism (SCH) as demonstrated by elevated TSH levels (cut off value  $5 \mu\text{g/dl}$ ). We have compared this with the population prevalence of SCH as determined by an epidemiological study done by the Department of Endocrinology in our institution in the year 2009. We have also attempted to find the correlation between hypothyroidism, gender, lithium prophylaxis and family history of mood disorder. Results: The results of our study indicate that there is no association between SCH and Bipolar disorders. We found that the prevalence rates of SCH and hypothyroidism in both males and females in the bipolar group be comparable to that in the general population. There is a however a significant association between family history of mood disorder in first degree relatives and patients having subclinical hypothyroidism (odds ratio 5.504 and p=0.012). There were no statistically significant associations between thyroid abnormalities and age, duration of illness and lithium prophylaxis. Conclusion: There is no significant association between SCH and Bipolar disorders. Family history of mood disorder and hypothyroidism show significant association

**E. Psychotropic Polypharmacy for the Treatment of Bipolar Disorder in Taiwan**

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Objective: Psychotropic polypharmacy is proliferating in the treatment of bipolar disorders. Yet in inpatient settings, there is a scarcity of evidence about the prevalence and predictors of different combinations of polypharmacy. Methods: From 2000 to 2007, the Nationwide Psychiatric Inpatient Medical Claims dataset in Taiwan were used to examine, of bipolar inpatients' prescriptions, for the use of mood stabilizers, antipsychotics and antidepressants. Results: Among the prescriptions for 5,449 Chinese bipolar inpatients (51% women, age 36.8 [SD=12.4]), 71% contained between-class polypharmacy, and 17% contained within-class polypharmacy. Multivariable analysis showed that being elderly (>50 years) and having treatment at medical centers were less likely to receive polypharmacy, while lower prescribed doses predicted polypharmacy. Additionally, receiving polypharmacy was not associated with a higher readmission rate within one year. Conclusion: The present study suggests that polypharmacy in various forms is substantial in the treatment of inpatients with bipolar disorder. Randomized studies are suggested to compare the cost-effectiveness of common psychotropic combinations and monotherapy to treat bipolar disorder.

## **F. Association VNTR Polymorphism Dopaminergic System Genes with Depression in the Open Population of Men Aged 25-64 in Russia**

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**Objective:** To examine the association of genes DRD4, DAT with depression to the open population of men aged 25-64 in Novosibirsk, Russia. **Material and Methods:** Within the framework of program WHO MONICA-MOPSY in 1994 surveyed a random representative sample of men aged 25-64 years (657 men). To assess the level of depression test was used MONICA-MOPSY. Genotyping of VNTR polymorphisms studied gene DRD4, DAT was conducted according to published methods: gene DRD4 (Lichter JB, et al., 1993; Schmidt D. et al., 2001), gene DAT (Mitchell RJ et al., 2000; Kang M. et al., 1999; Stöber G. et al., 1998 ). Statistical analysis was used software package of SPSS 11.5. Chi square ( $\chi^2$ ) statistic was used to investigate whether distributions of categorical variables differed from one another in between the groups. **Results:** Prevalence of depression in the population of 25 to 64 year-old males was as high 29%. With a depression was significantly associated genotype 4/6 ( $\chi^2=11.725$  df=1 p<0.001) and allele 6 ( $\chi^2=18.036$  df=1 p<0.0001) gene DRD4. As well as with a depression was significantly associated genotype 9/9 ( $\chi^2=7.583$  df=1 p<0.001) and allele 9 ( $\chi^2=4.390$  df=1, p<0.05) gene DAT. **Conclusion:** There is high prevalence of depression at males aged 25-64 in Russian. Depression was significantly associated with VNTR polymorphisms 4/6 gene DRD4 and 9/9 gene DAT.

## **G. Association between the Genes PKB1、 GSK-3B and Personality in the Recovered Patients with Depression**

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**Objective :** To explore the genes such as PKB1、 GSK-3B, and search for the interaction effects among them on the personality in Chinese North Han the recovered patients with depression .**Methods :** 124 patients recovered into the study group, all subjects were assessed by Eysenck Personality Questionnaire (EPQ). Single nucleotide polymorphisms (SNPs) of PKB1 and GSK-3B gene were detected by polymerase chain reaction (PCR), **Results:**1. There were no significant difference in distributions of mean age, sex and educational background between different personality groups (P>0.05).2. Hardy-Weinberg equilibrium test: Except rs2494738 in PKB1 has significantly difference in the Hardy-Weinberg equilibrium (P0.05), As well as rs6782799 genotypes and alleles frequency distribution (P>0.05). 3.2 PKB1 rs2494746 No statistically significant difference of each personality dimension means was detected between different rs2494746 genotypes and alleles (P>0.05), As well as rs2494746 genotypes and alleles frequency distribution (P>0.05). 4. Interaction effects gene-gene analysis: UNPHASED results showed no significant interaction effects were detected for the GSK-3Brs 6782799-PKB1 rs2494746 combination (P>0.05) in personality dimension. **Conclusions**1. No significant associations were found between PKB1、 GSK-3B single gene and EPQ personality in Chinese Han the recovered patients with depression. 2. No interaction effects were detected including the between with GSK-3B rs6782799 and PKB1 rs2494746 on EPQ personality in Chinese Han the recovered patients with depression.

## **OP3: CHILD, ADOLESCENT, AND GERIATRIC PSYCHIATRY**

### **A Child and Adolescent Mental Health Service in Low- and Middle-Income Countries: Opportunities, Obstacles and Dilemma for Child Psychiatrists**

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**Objectives:** This review aims to identify what are the obstacles and opportunities in providing child and adolescent mental health service (CAMHS) in low and middle-income countries (LAMIC). Another area of interest is the role of child psychiatrist in the dilemma of ‘providing ideally service for the minority’ and ‘serving the majority with different quality of care’. **Methods:** Articles from PsychInfo and Pubmed published in unlimited period of time were searched with keywords ‘child and adolescent’ ‘mental health services’ ‘child psychiatry’ ‘low and middle income countries’ ‘low income countries’ and ‘developing countries’. Then articles from each LAMIC were searched individually to cover 154 LAMIC. **Results:** PsychInfo retrieved 54 articles while Pubmed retrieved 632 articles. Searching Pubmed with 154 LAMIC retrieved 7 related articles. Without duplication and with respect to eligibility criteria, 23 articles were reviewed. Results were categorized to 6 domains according to The World Health Organization Assessment Instrument for Mental Health Systems (WHO-AIMS), which was the only tool developed to collect information on available resources within the MH systems. **Conclusion:** CAMHS provision in LAMIC needs particular strategy to maximize the potential of limited resources. Mental health policy and awareness campaign are powerful measures to drive CAMHS. Training CAMHS for primary health care professionals and integrated CAMHS in existing service is needed in

resource-constraint settings. Wide CAMHS research gap still need to close. To overcome these challenges, child psychiatrist in LAMIC should have both medical and public health view.

### **B. Cognitive Behavioral Intervention for Anxiety disorders in Children with Pervasive Developmental Disorders.**

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Background: Children with pervasive developmental disorders (PDD) sometimes associate with anxiety disorders, which cause significant functional impairment in school performance and social activities. We investigated the effect of cognitive behavioral intervention for children with PDD and anxiety disorders. Method: Subjects were three children with PDD and anxiety disorders. For these subjects we conducted our cognitive behavioral program. We assessed SCAS, and DSRS-C before and after conducting CBT program. Results: After the CBT program, improvements of anxiety symptoms were observed in all three PDD patients. Conclusion: These three cases were treated successfully by use of CBT program. Further investigation with larger samples must be done in the near future.

### **C. The Prevalence and Associated Factors of Internet Gambling Behavior Among Undergraduate Students at Higher Education Institute with Campuses in Bangkok**

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Objective: To study the prevalence and associated factors of the internet gambling behavior among undergraduate students at a higher education institute with campuses in Bangkok and its Environs. Methodology: The method of cross-sectional descriptive study by stratified random sampling was employed with proportional allocation according to the number of population of each of the 15 faculties of a higher education institute. The total number of consenting participants was 1,326 with ages ranging from 18 to 24 years. The instrument of sampling was a questionnaire developed by the researcher from literature review and a pilot study. The data were presented in the form of descriptive and analytical statistics. Results: The prevalence of internet gambling within a period of 12 months was 5.5%. Several associated factors of internet gambling, when comparing students who did and did not take up internet gambling, were found such as being male, being alone or in the company of lovers most of the time, living in slums or in areas with a criminal or gambling environment, having dysfunctional families, using or experimenting with substances, suffering from mental illness, and, agreeing with internet gambling. Factors significantly associated to internet gambling in our logistic regression model were being male, single, living in a gambling environment, suffering from mental illness, having dysfunctional families, and agreeing with internet gambling. Conclusion: The prevalence of internet gambling among our population is 5.5%. We found several associated factors that should be considered for planning the systematic prevention of youths in risk groups from internet gambling.

### **D. Old Age Psychiatry- Meeting the Need through Innovative Undergraduate Training**

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An understanding of old age psychiatry is increasingly becoming an essential part of the skills base required for doctors in a range of specialties and not limited to psychiatrists and geriatricians. Worldwide the ageing population is growing and there are increasing demands on GP's, Emergency Departments, and inpatient units across the spectrum of medicine to provide management of mental health issues in older patients. The impact of mental health on physical health is well documented and rehabilitation and recovery following surgical procedures, stroke, as well as optimum management of chronic disease is greatly impeded in patients with depression. Access to specialist old age psychiatrists is limited in many areas and we believe that all doctors need some knowledge and understanding of this discipline. Currently most training in this domain takes place in the postgraduate and specialist training rotations and then is limited mainly to psychiatrists and some geriatricians. We review undergraduate training in this growing area of need, looking at the current curriculum coverage for medical students. We discuss the advantages of undergraduate training and argue that coverage of this field during the specialist training rotations is too late.

### **E. Neuropsychiatric Symptoms and the Risk of Progression to Dementia: Findings from Hong Kong Memory and Ageing Prospective Study**

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Background: A number of neurophysiological, neuroimaging and cerebrospinal fluid measures have found to be predicting progression to dementia. However, they are not readily available in low- and middle-income

countries. Clinical parameters like neuropsychiatric (NP) symptoms may offer additional information to aid the prediction. Methods: Community-dwelling non-demented Chinese older adults were invited to participate in this five-year longitudinal study. At baseline, each participant was assessed with Clinical Dementia Rating (CDR), Mini-mental state examination, list learning and delayed recall, and category verbal fluency test. Severity of NP symptoms was evaluated with Neuropsychiatric Inventory (NPI). Global cognitive status at the end of study period was determined by CDR. Results: A total of 454 Chinese older adults were followed up for five years. At baseline, their mean age was 71.4 (6.7) and mean MMSE score was 26.1 (2.6). Of them, 159 (35.0%) exhibited one or more NP symptoms. Night-time behavior disturbance (17.0%), anxiety (13.0%), depression (12.3%), and apathy (11.9%) were the commonest NP symptoms. At the end of follow up, 66 participants (14.5%) developed dementia. 35.7% of participants with apathy at baseline developed dementia, comparing to 11.4% of those without apathy (Chi square=7.38, p=0.007). Conclusions: Neuropsychiatric symptoms are common in non-demented elderly. Apathy in particular is a predictor of dementia and may reflect early neuronal degeneration. Further studies may be conducted to assess if effective management of NP symptoms can improve cognitive function.

#### **F. Validation of the Bangla Version of the Geriatric Depression Scale-15 for a Bangladeshi Sample**

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Background: Depression among the elderly population frequently goes undetected or misdiagnosed probably due to the lack of awareness involving the symptoms in the early stages, or otherwise mistaking the symptoms as common traits of the aging process. Lacking of validated Bangla screening tool for diagnosis of Geriatric Depression in Bangladesh attempted to quantify and address the problem in our country. Objectives: This study was carried out to validate Bangla version of Geriatric Depression Scale (GDS-B-15) among Bangladeshi elderly population. Methods: This was a cross sectional study, conducted from January 2011 to June 2011 at Bangladesh Association of the Aged and Institute of Geriatric Medicine. Purposive and consecutive sampling technique was used for collecting patients aged 57 years and above irrespective of sex attended outdoor and indoor of the same institution. Patients having significant cognitive impairment using Mini-mental State Examination (MMSE <24/30) and with history or presence of psychotic or bipolar mood disorder were excluded. A research assistant administered the Translated and adapted Bangla GDS-B-15 to a convenience sample of 100 elderly people. A psychiatrist examined all elderly people using the Structure Clinical Interview for DSM-IV diagnosis for depression. Results: Internal consistency tested using Cronbach's alpha coefficient was 0.918. The optimal Receiver Operating Characteristics (ROC) cut-off score of Bangla GDS was 5 with a sensitivity of 82.6%, specificity of 96.1%, and positive predictive value of 86.4 % and negative predictive value of 94.9 %. Conclusion: The Bangla GDS-B-15 is thus a valid and reliable screening scale for identifying Geriatric Depression in Bangladesh.

#### **G. Development of a Thai Dementia Patients' Caregiver Burden Scale**

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Objective: To develop a scale to measure caregivers' burden of care of patients with dementia and explore its factor structure. Methods: The initial draft of the Thai Dementia patients' Caregiver Burden scale (Thai-DCAB scale) was developed based on literature review, in-depth interview and expert opinions. The draft was administered in 203 caregivers of dementia patients of two large public hospitals in southern Thailand. An exploratory factor analysis using maximum likelihood extraction with varimax rotation was conducted in this study. The reliability of the scale was assessed using internal consistency (cronbach's alpha coefficient). Results: The Thai-DCAB scale had 18 questions with 3-factor solution, covering psychological, physical and financial burdens of the caregivers in taking care of dementia patients, accounting for 67% of the variance with an alpha coefficient of 0.95. Conclusion: The Thai-DCAB scale has high internal consistency and captures key theoretical constructs of the perceived burden among caregivers of patients with chronic and deteriorating diseases and in accordance with the social and cultural contexts and the way of life of the Thai people.