In recognition of the rapidly increasing economic and social importance of dementia as a global health problem[1] and of its impact on public health in China’s rapidly aging population, the first three manuscripts in this issue focus on cognitive decline in the elderly.

The second research article by He and colleagues[6] assessed the effectiveness of a Traditional Chinese Medicine (TCM) intervention on delaying cognitive decline in elderly individuals with mild cognitive impairment and radiological evidence of cerebral white matter lesions. Eighty individuals 65 or older were classified into one of the four main TCM ‘constitutions’ (qi deficiency, yang deficiency, phlegm dampness, or blood stasis) and then randomly assigned to a treatment-as-usual group or an intervention group. The TCM intervention involved training focused on encouraging changes in diet, lifestyle, and emotional regulation; physical exercises; and six monthly courses of moxibustion (heating acupoints by burning the moxa of dried mugwort on the skin above the points). Based on changes in the Chinese version of the Montreal Cognitive Assessment (MoCA) scale,[7] the intervention group showed significantly greater improvement in cognitive function than the control group over the 6 months of the trial. However, the outcome was not assessed by blinded evaluators and the evidence for the differential effect of the TCM treatment on the four TCM constitutional types was ambiguous, so further research in this area is needed before this TCM intervention can be recommended as a standard treatment for mild cognitive impairment.

The third original research study by Byrne and colleagues[8] is also focused on cognitive deficits, but in this case it is about a subtype of cognitive deficit in chronic schizophrenia that is important but rarely systematically assessed: ‘social cognition’. This is a relatively new construct that includes decoding social and emotive information, affect perception and regulation, and causal attribution.[9,10] The extent to which these functions are associated with the more commonly assessed cognitive domains (learning, memory, etc.), with the positive and negative symptoms of schizophrenia, and with overall social functioning remains unclear. The authors report the results of a controlled trial of a 6-week computer-based cognitive remediation program for individuals with chronic schizophrenia. The 20 patients in the control group received treatment-as-usual while the 20 patients in the intervention group received the usual treatment and also completed at least 12 computer-based training sessions over 6 weeks. Each session included a 30-minute computerized drill training (CDT) program involving repetitive exercises in five basic cognitive skills (arithmetic, number lists, pair matching, special working memory, and word lists) and a 10-minute module on facial affect recognition (FAR) that trained respondents to identify 6 different facial emotions using 72 photographs of 36 different Asian individuals. At the end of the 6-week trial there were no significant differences
between groups in clinical symptoms or in most cognitive measures, but there was a significantly greater improvement in the intervention group compared to the control group in social functioning (assessed using the Personal and Social Performance scale, [PSP]^{[11]}) and a trend ($p=0.09$) for greater improvement in the intervention group for facial recognition. Further work is needed in this area both to elaborate the theoretical model of ‘social cognition’ and to assess the effect of different types of interventions on deficits in social cognition experienced by individuals with severe mental illnesses.

The Forum by Amerio and colleagues$^{[12]}$ is a follow-up to the Forum pieces in the previous issue$^{[13,14]}$ about comorbid bipolar disorder (BD) and obsessive compulsive disorder (OCD). The core question is whether BD-OCD patients have a severe form of BD or concurrently suffer from two clinically and etiologically separate conditions. To address this issue the authors use data from their recently published systematic review$^{[15]}$ to specifically focus on the heritability of BD and OCD in persons with comorbid BD and OCD. Five of the 7 studies they identified that provide data on this question reported that a family history of BD was more common in BD-OCD patients than in non-BD-OCD patients and that a family history of OCD was less common. This supports the hypothesis that most BD-OCD patients have a subtype of BD, not two separate co-occurring conditions. Thus treatment for such patients should focus on mood stabilization; clinicians should only consider selective serotonin reuptake inhibitors (SSRIs) if initial strategies prove ineffective.

This issue includes two case reports. The first, by Saha and colleagues$^{[16]}$ reports on a tragic case from rural India in which a mother of four with a 6-year history of psychosis that never received treatment murdered her 3-month-old infant while under the influence of command hallucinations. This is a somber reminder that basic mental health care is not available in poor rural communities of many low- and middle-income countries. The World Health Organization has developed the Mental Health Gap program$^{[17]}$ for providing basic care in such communities and has promoted the program for over a decade, but local implementation of this program requires political commitment, modest resources, and community-based advocates who champion the cause of the mentally ill.

The second case report by Wang and Wang$^{[18]}$ discusses a cardiac arrest and death in a patient with bipolar disorder one hour after receiving modified electroconvulsive therapy (MECT). The patient was a 58-year-old male with no history of cardiac problems being treated for a recurrent episode of non-psychotic mania. MECT had been effective in the treatment of a manic episode he experienced 6 years previously. In this instance the first session of MECT did not result in a convulsion, but he recovered from the anesthesia and was transferred to the recovery room. However, his condition subsequently deteriorated rapidly; his blood pressure and pulse dropped precipitously over 20 minutes and attempts to resuscitate him failed. The family did not permit an autopsy, but the authors surmise that the use of haloperidol 17 hours prior to the MECT session exacerbated the cardiac effects of the non-convulsive MECT, resulting in death. The take-home message from this case is that taking a detailed cardiac history and, in older patients, conducting a basic cardiac work-up (including cardiac enzymes) should always precede the use of MECT, even in patients who have used it previously.

The Biostatistics in Psychiatry article in this issue by Wang and colleagues$^{[19]}$ discusses the dangers of using common methods for imputing values when they are below (or above) the detection limit of the instrument used to assess the variable in a study. Imputation of undetectable results (i.e., those that are below or above the instrument’s threshold) is typically necessary when using physical devices to assess outcomes (e.g., alcohol blood levels), but it can also occur in psychosocial research when an individual falls above or below a certain range of scores on a questionnaire. The authors show that simple methods of imputation (such as replacing unknown results below the detection limit with the mean of the range of values between 0 and the lower detection limit) can dramatically change the reported outcome of a study when the imputed value is treated as if it were real in statistical analyses. Statistical tests based on datasets that use standard methods to impute unknown results are often uninterpretable. This problem is most pronounced when trying to use the estimated geometric mean of a sample to represent the geometric mean of the value in the population from which the sample was selected.

[Shanghai Arch Psychiatry. 2015; 27(5): 260-262. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.216008]
References

1. Alzheimer’s Disease International. World Alzheimer Report 2015, the Global Impact of Dementia: an Analysis of Prevalence, Incidence, Cost and Trends. London: Alzheimer’s Disease International; 2015.

2. Dong YH, Mao XQ, Liu L, He W, Liu Y. Prevalence of Alzheimer’s Disease among Chinese people aged 60 years and over: a meta-analysis. Zhongguo Gong Gong Wei Sheng. 2014; 30(4): 512-514. Chinese.

3. Wang MJ, Zhu YB, Shi ZY, Li CB, Shen Y. Meta-analysis of the relationship of peripheral retinal nerve fiber layer thickness to Alzheimer’s disease and mild cognitive impairment. Shanghai Arch Psychiatry. 2015; 27(5): 263-279. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215100

4. Wu Y, Xu WW, Liu XW, Xu Q, Tang L, Wu SY. Adjunctive treatment with high frequency repetitive transcranial magnetic stimulation for the behavioral and psychological symptoms of patients with Alzheimer’s disease: a randomized, double-blind, sham-controlled study. Shanghai Arch Psychiatry. 2015; 27(5): 280-288. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215107

5. Reisberg B, Auer SR, Monteiro IM. Behavioral pathology in Alzheimer’s disease (BEHAVE-AD) rating scale. Int Psychogeriatr. 1996; 8(suppl 3): 301-308; discussion 351-354. doi: http://dx.doi.org/10.1017/S1041610297003529

6. He SM, Li LJ, Hu JY, Chen QL, Shu WQ. Effectiveness of Traditional Chinese Medicine (TCM) treatments on the cognitive functioning of elderly persons with mild cognitive impairment associated with white matter lesions. Shanghai Arch Psychiatry. 2015; 27(5): 289-295. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215109

7. Chen H, Yu H, Kong LL, Yi L, Wang JD, Zhou TT, et al. Reliability and validity of Beijing version of Montreal Cognitive Assessment in the elderly people residing in Qingdao. Guo Ji Lao Nian Yi Xue Za Zhi. 2015; 36(5): 202-205. Chinese. doi: http://dx.chinadoi.cn/10.3969/j.issn.1674-7593.2015.05.004

8. Byrne LK, Pan LY, McCabe M, Mellor D, Xu YF. Assessment of a six-week computer-based remediation program for social cognition in chronic schizophrenia. Shanghai Arch Psychiatry. 2015; 27(5): 296-306. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215095

9. Eack SM. Cognitive Remediation: A new generation of psychosocial interventions for people with schizophrenia. Soc Work. 2012; 57(3): 235-246

10. Ziv I, Leiser D, Levine J. Social cognition in schizophrenia: Cognitive and affective factors. Cogn Neuropsychiatry. 2011; 16(1): 71-91. doi: http://dx.doi.org/10.1080/13546805.2010.492693

11. Si TM, Shu L, Su YA, Tian CH, Yan Y, Cheng J, et al. The Chinese version of the Personal and Social Performance scale (PSP): validity and reliability. Psychiatry Res. 2010; 185: 275-279. doi: http://dx.doi.org/10.1016/j.psychres.2010.05.001

12. Amerio A, Tonna M, Adone A, Stubbs B, Ghaemi SN. Heredity in comorbid bipolar disorder and obsessive-compulsive disorder patients. Shanghai Arch Psychiatry. 2015; 27(5): 307-310. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215123

13. Peng DH, Jiang KD. Comorbid bipolar disorder and obsessive-compulsive disorder. Shanghai Arch Psychiatry. 2015; 27(4): 246-248. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215009

14. Shi SX. Obsessive compulsive symptoms in bipolar disorder patients: a comorbid disorder or a subtype of bipolar disorder? Shanghai Arch Psychiatry. 2015; 27(4): 249-251. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215091

15. Amerio A, Stubbs B, Odone A, Tonna M, Marchesi C, Ghaemi SN. The prevalence and predictors of comorbid bipolar disorder and obsessive-compulsive disorder: A systematic review and meta-analysis. J Affect Disord. 2015; 186: 99-109. doi: http://dx.doi.org/10.1016/j.jad.2015.06.005

16. Saha R, Singh SM, Nischal A. Infanticide by a mother with untreated schizophrenia. Shanghai Arch Psychiatry. 2015; 27(5): 311-314. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215058

17. World Health Organization. mhGAP Intervention Guide for Mental, Neurological and Substance Use Disorders in Non-specialized Health Settings. Geneva: World Health Organization; 2010

18. Wang ZH, Wang JY. Sudden cardiac death after modified electroconvulsive therapy. Shanghai Arch Psychiatry. 2015; 27(5): 315-318. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.214169

19. Wang HY, Chen GQ, Lu X, Zhang H, Feng CY. The effect of simple imputation on inferences about population geometric means when data are missing in biomedical research due to detection limits. Shanghai Arch Psychiatry. 2015; 27(5): 319-325. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.215121