



# Hong Kong Psychogeriatric Association Newsletter

香港老年精神科學會會訊

MAY 2020

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## MESSAGE FROM THE NEWSLETTER COMMITTEE

Further to the review of existing cognitive tests in the last issue of our newsletters, Professor Helen Chiu introduces the cognitive screening test which is better fitted to our locality: The Hong Kong Brief Cognitive Test (HKBC). Ms. Daphne Law and her colleagues have conducted a pilot study comparing HKBC to the Montreal Cognitive Assessment in the local population. Please do not miss the call for HKPGA research awards and the photos of the 21st anniversary HKPGA Annual Scientific Symposium cum AGM. Lastly, you can make your submission via [info@hkpga.org](mailto:info@hkpga.org) and visit [www.hkpga.org](http://www.hkpga.org) for archives of the HKPGA newsletters.

## The Hong Kong Brief Cognitive Test (HKBC)- An overview

**Helen FK CHIU, Emeritus Professor,  
Department of Psychiatry, The Chinese University of Hong Kong**



There are many existing brief cognitive tests for assessment of cognitive function in the elderly. The 2 most commonly used tests are the Mini-Mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA). The MMSE has many limitations, e.g. it does not assess adequately executive function and it is not very sensitive for screening people with mild cognitive impairment (MCI). Furthermore, its copyright issue had led the Hospital Authority (HA) of Hong Kong to call to a halt its use in the HA sector.

The MoCA has become very popular in recent years as it assesses several domains of cognitive function and was developed to screen for MCI. However, performance on MoCA is strongly influenced by educational levels and adjustment of cut-off scores are used for various educational levels. In Hong Kong, there are several versions of criteria or adjustment of cut-off score of MoCA, which generates confusion in local clinicians on which scheme to use as well as the interpretation of the score. In addition, some items of the MoCA are difficult for older people who are illiterate, leading to anxiety when they take the test. In our experience, trail making test, clock drawing and drawing of a cube are particularly difficult for illiterate elderly.

Since a few years ago, psychogeriatricians in Hong Kong, China and Taiwan had discussed the need of a cognitive test specially developed for Chinese older people who generally had a lower educational level compared with older people in Western countries. Amidst this background, our team in Hong Kong has developed a new brief cognitive test, the Hong Kong Brief Cognitive Test (HKBC). Details of the study can be found in the published paper (1).

In summary, the items on the HKBC was compiled after an extensive review of the literature on brief cognitive tests and a pilot study. Attention was paid to select or modify test items so that the test items were not much affected by educational level. The main study involved 3 groups of subjects, 99 normal controls, 132 subjects with Major Neurocognitive Disorders (NCD) and 128 subjects with Mild Neurocognitive Disorders according to DSM 5 criteria. Subjects were Chinese aged 65 or above recruited from elderly centres and Psychogeriatric clinics in Hong Kong. The HKBC, Cantonese MMSE and Cantonese version of MoCA were administered to the subjects. The HKBC mean scores showed significant differences among the 3 groups of subjects. An optimal cut-off score of 21/22 distinguishes normal subjects from those with cognitive impairment. The HKBC was slightly superior than the MMSE and MoCA in differentiating normal from cognitively impaired subjects.

The advantages of the HKBC includes its short time of administration as it takes around 7 minutes only. Educational bias is much less than the MMSE and the MoCA and the scoring of the HKBC does not need to be adjusted for education. The HKBC assesses several domains of cognitive function and hence it can give a profile of the domains of cognitive impairment in the subject. Further, the HKBC can be used to differentiate between Major NCD, Mild NCD and normal subjects. There are 2 alternate Forms of the HKBC for repeated use within a short time. Apart from the HKBC Form, a detailed Instruction manual can be downloaded from the link near the end of this article. Training workshops have been held intermittently.



The HKBC is particularly useful in elderly populations with lower educational levels. An English version of the HKBC will be ready soon so that other countries may adapt the HKBC for their use.

The HKBC has been reviewed in the Current Opinion in Psychiatry (2) and has been rated as “Of Outstanding Interest”. The HKBC is used in a number of studies in China currently. We are planning a study to examine the cut-off scores of the HKBC for different severity of dementia. Recently, the HKBC has been endorsed by the Psychogeriatric Working Group of the Hospital Authority as one option among the brief cognitive tests for clinical use.

The HKBC can be downloaded from: <http://www.psychiatry.cuhk.edu.hk/HKBC>

### **Reference:**

1. Chiu HF et al. Development and validation of a new cognitive screening test: The Hong Kong Brief Cognitive Test (HKBC). International Journal of Geriatric Psychiatry 2018;33:994-999.
2. Fam J et al. Dementia care in low and middle-income countries. Current Opinion in Psychiatry 2019; 32:461-464.



# A Pilot Survey on Clinical Application of Hong Kong Brief Cognitive (HKBC) Test in Occupational Therapy Department of Shatin Hospital - Comparison of HKBC with HK-MoCA and HK-MoCA 5-Min

Daphne ST LAW, Occupational Therapy Department, Shatin Hospital

## **BACKGROUND**

Occupational Therapy Department of Shatin Hospital (SH) have a high service volume for cognitive assessments for both Medical & Geriatric (M&G) and Psychogeriatric (PG) teams. Common cognitive screening tests conducted by occupational therapists in our department were Montreal Cognitive Assessment Hong Kong Version (HK-MoCA) and Montreal Cognitive Assessment 5-Minute Protocol Hong Kong Version (HK-MoCA 5-Min). In 2018, a new cognitive screening test – Hong Kong Brief Cognitive (HKBC) Test was developed. The test included several cognitive domains including immediate recall/ attention, delayed recall, recent memory, orientation, frontal lobe function test, general knowledge, visuo-spatial construction, executive function and language. Its advantages included short administration time (7 minutes) and minimal educational bias.

## **OBJECTIVE**

To explore the applicability of HKBC as a cognitive screening test for our clientele in the Occupational Therapy Department of Shatin Hospital.

## **METHODS**

A pilot survey was conducted in June 2019 – January 2020. Subjects aged 60 or above with the clinical diagnosis of dementia were recruited from Medical & Geriatric (M&G) and Psychogeriatric (PG) teams in Occupational Therapy Department of Shatin Hospital. Paired assessments of HK-MoCA & HKBC and HK-MoCA 5-Min & HKBC were collected for data analysis. Questionnaire was collected from 32 Occupational therapists (OTs) on their experience in using HKBC.

## **RESULTS**

77 pairs of HK-MoCA & HKBC and 79 pairs of HK-MoCA 5-Min & HKBC were conducted by 32 OTs. The demographics of these cases were presented below (TABLE 1). The concordant rate to clinical diagnosis of dementia of HK-MoCA and HKBC pairs were 59.7% & 90.9% (TABLE 2). The concordant rate to clinical diagnosis of dementia of HK-MoCA 5-Min & HKBC pairs were 73.4% & 91.1% (TABLE 3). All OTs reported that HKBC took shorter time as compared to HK-MoCA. Sixty three percent of OTs reported similar time



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spent on conducting HK-MoCA 5-Min & HKBC. Ninety Five percent of OTs reported that HKBC included more information as a cognitive screening test as compared to HK-MoCA 5-Min.

TABLE 1: Demographics of HK-MoCA & HKBC pairs and HK-MoCA 5-Min & HKBC pairs

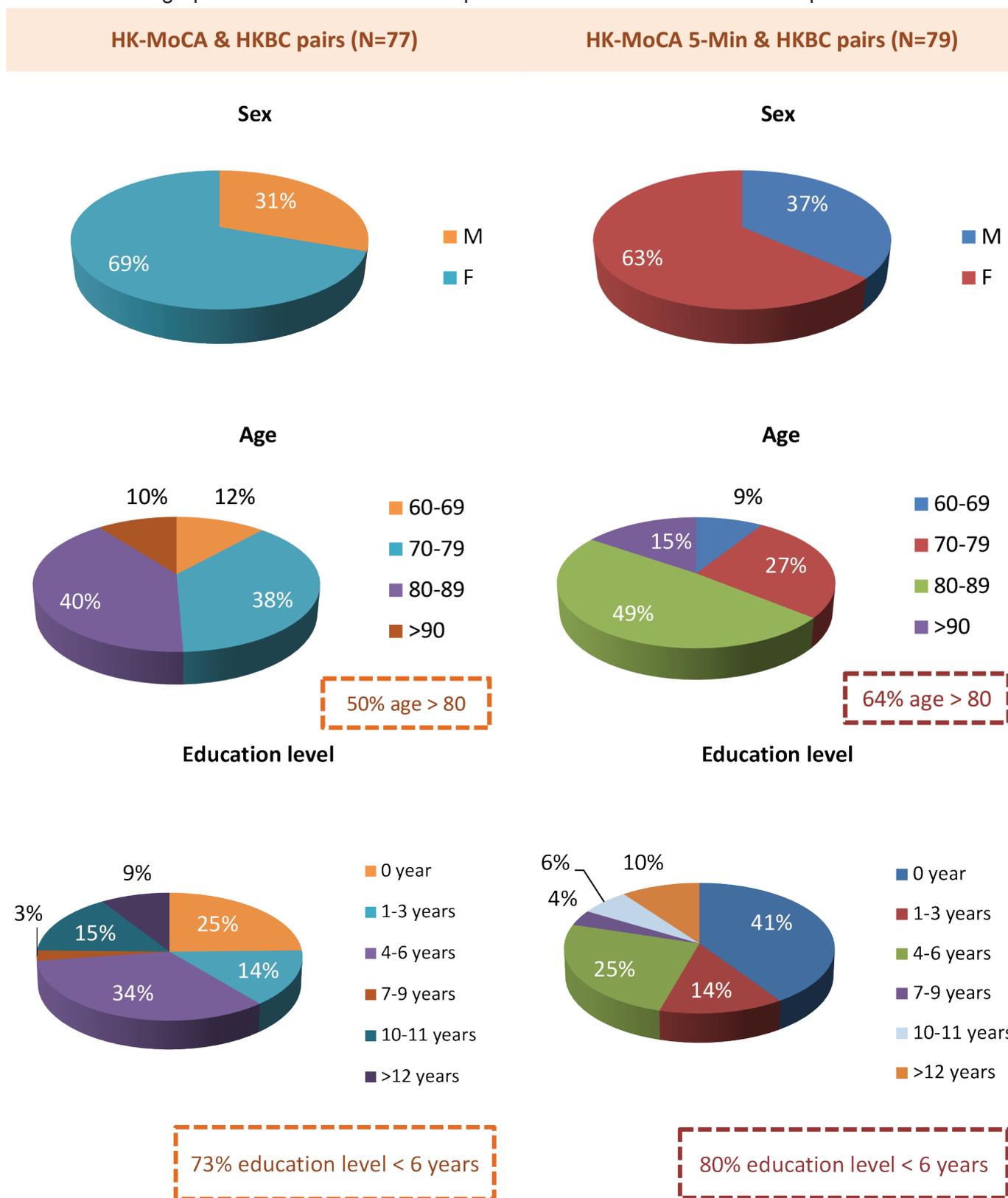


TABLE 2: Comparison of dementia diagnosis made by clinicians with HK-MoCA & HKBC cut-off (N=77)

<b>Diagnosis concordant with HK-MoCA</b>	<b>N=46</b>	<b>59.7%</b>
<b>Diagnosis concordant with HKBC</b>	<b>N=70</b>	<b>90.9%</b>
<b>Diagnosis concordant with both HK-MoCA &amp; HKBC</b>	<b>N=44</b>	<b>57.1%</b>

TABLE 3: Comparison of dementia diagnosis made by clinicians with HK-MoCA 5-Min & HKBC cut-off (N=79)

<b>Diagnosis concordant with HK-MoCA 5-Min</b>	<b>N=58</b>	<b>73.4%</b>
<b>Diagnosis concordant with HKBC</b>	<b>N=72</b>	<b>91.1%</b>
<b>Diagnosis concordant with both HK-MoCA 5-Min &amp; HKBC</b>	<b>N=55</b>	<b>69.6%</b>

## CONCLUSION

HKBC as a cognitive screening test can be an option for M&G and PG teams under the Occupational Therapy Department of Shatin Hospital according to the following preliminary findings:

- Higher concordant rate with diagnosis of dementia as compared to HK-MoCA & HK-MoCA 5-Min
- Took shorter administration time as compared to HK-MoCA
- Included more information with similar time spent when compared to HK-MoCA 5-Min
- Not necessary to verify the clients' education levels (FIGURE 1)

Limitations of this pilot survey were small sample size and the use of convenience sampling, future research involving a larger number of subjects is required to study the HKBC in detail.



Same person, same cognition, with different reported education levels can be sorted into different cut-off groups  
 Therapist needed verification on education levels if no informant accompany with during assessment

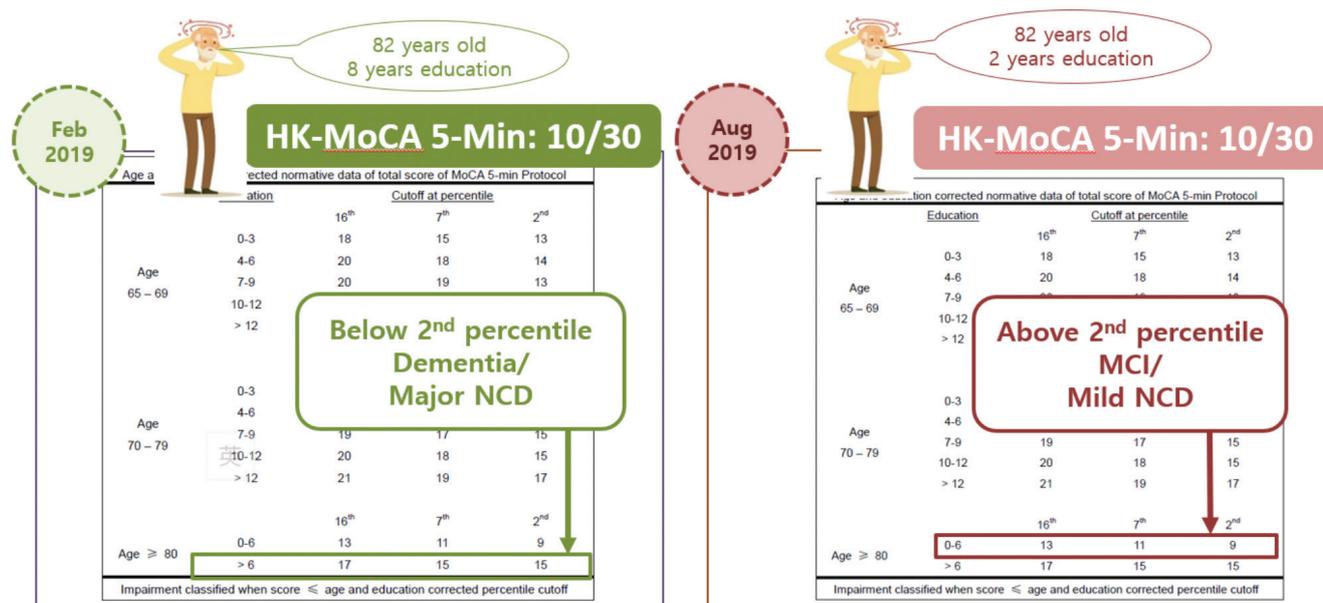


FIGURE 1: Need verification on education levels example

## REFERENCES

1. Chiu, H.F., Zhong, B. L., Leung, T., Li, S. W., Chow, P., Tsoh, J., Yan, C., Xiang, Y.T. & Wong, M. (2018). Development and validation of a new cognitive screening test: The Hong Kong Brief Cognitive Test (HKBC). *International journal of geriatric psychiatry*. 2018;1-6.
2. Wong A, Xiong YY, Kwan PW, et al. The validity, reliability and clinical utility of the Hong Kong Montreal Cognitive Assessment (HK-MoCA) in patients with cerebral small vessel disease. *Dement Geriatr Cogn Disord*. 2009;28:81-87.
3. Wong A, Law LS, Liu WY, et al. Montreal Cognitive Assessment: one cutoff never fits all. *Stroke*. 2015;46:3547-3550.

## ACKNOWLEDGEMENT

I would like to thank the occupational therapists of Shatin Hospital for their contribution in data collection and valuable feedback on this pilot project.



## HKPGA RESEARCH AWARD 2020: CALL FOR APPLICATION

The Hong Kong Psychogeriatric Association is happy to announce that the contest for the captioned award is now open to HKPGA members for submission.

### Call for submission

We welcome original scientific research works themed on old age psychiatry. Submitted works would be evaluated by an independent panel of experts and ONE winner would be selected based on the merits of the scientific project, and the contributions made by the candidates to the HKPGA and the field of Psychogeriatrics in general.

### Award

A cash prize of HKD\$2,000 will be awarded to the winner

### Eligibility requirement:

- The contest is open to all HKPGA members of ALL professional disciplines;
- Candidate should be under 40 years of age prior to the submission of work for this contest;
- The candidate is required to present the paper in English in a meeting of HKPGA;
- The study submitted should not be published at the time of submission for the Award or published within 1 year before submission for the Award
- Rating priority is given to papers that have not been published or accepted by journals or books at the time of submission for the Award

### Format of research report

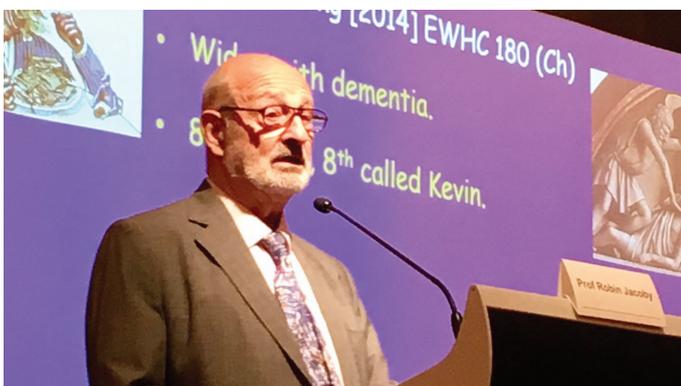
- Only electronic copy of the report in English will be accepted.
- An abstract within 500 words and the full manuscript on the submitted research work, along with the completed application form and a brief CV of the applicant should be emailed to [info@hkpga.org](mailto:info@hkpga.org) on or before **17 July 2020**.
- The email subject should be stated with **'Submission for the HKPGA Research Award 2020'**.
- To maintain the quality of this contest, the HKPGA is not obligated to appoint any winner if it is advised by the panel of experts that none of the submitted works is of sufficient scientific merit.

Please forward any enquiries to the email address above. We look forward to receiving your submissions eagerly!



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# HKPGA AGM cum Annual Scientific Symposium 2019 at the Hyatt Regency (TST) Hotel



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# COUNCIL NEWS

The HKPGA Council would like to express our condolences to Prof. Tom Arie's family. Prof. Arie was born in 1933 and passed away in May 2020. He was the Emeritus Professor of the University of Nottingham and was one of the founders for Old Age Psychiatry. Prof. Arie was known for his kind and compassionate support to local psychogeriatricians and HKPGA. The leading Arie course has trained many professionals in Hong Kong in the late 1990s. Prof. Arie was the international advisor of HKPGA. He also gave insightful teaching via our annual symposiums and wrote articles for our newsletters (the April 2000, April 2001, August 2003 and October 2008 issues). The Council hereby expresses our greatest gratitude to Prof. Tom Arie.

The HKPGA Annual Scientific Symposium cum AGM 2019 has been held at the Hyatt Regency Hotel on 16 November 2019 (Saturday). The opening speech was delivered by our Patron, Dr. LAM Ching Choi on "Happy and Healthy Ageing". Prof. Robin Jacoby, Emeritus Professor of Old Age Psychiatry, University of Oxford gave his keynote speeches on "The bad guys often win: some thoughts on contentious probate" and "How can doctors and lawyers improve on capacity assessment? An audit of a career". Dr. Ian PAN, winner of the HKPGA research award 2019 and Prof. Helen CHIU shared their experiences on the Montreal Cognitive Assessment and Hong Kong Brief Cognitive Test respectively.

Workshops has been conducted to train local professionals for using the Hong Kong Brief Cognitive Test and functional assessment for older adults in 2019. Upcoming HKPGA Annual Scientific Symposium cum AGM will be held by video conferencing on one Saturday morning in November 2020. More details will be available soon.

The HKPGA is happy to announce that the Research Award 2020 is now open to HKPGA members for submission. We hope to promote research related to Old Age Psychiatry. The contest is open to all HKPGA members of ALL professional disciplines. An abstract within 500 words and the full manuscript on the submitted research work, along with the completed application form and a brief CV of the applicant should be submitted to [info@hkpga.org](mailto:info@hkpga.org), on or before **17 July 2020**.



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Dr. Connie Yan (Shatin Hospital)

Dr. Janice Chik (United Christian Hospital)

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